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VOL. X

SEPTEMBER 1877.

NO. 9

THE
MARYLAND FARMER:

A

MONTHLY MAGAZINE:

DEVOTED TO

Agriculture, Horticulture and Rural Economy.

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PUBLISHED BY

EZRA WHITMAN,

OFFICE, No. 145 WEST PRATT STREET,

BALTIMORE, MD.

NOTICE TO WHEAT GROWERS.

ZELL'S

CELEBRATED AMMONIATED

BONE SUPER-PHOSPHATE.

Price \$45 per Ton at Baltimore.

ZELL'S

ECONOMIZER,

Price \$35 per Ton at Baltimore.

UNRIVALLED FOR THE WHEAT CROP.

P. ZELL & SONS, Manufacturers,

No. 30 South Street, Baltimore.

The Maryland Farmer Purchasing Agency,

(By E. WHITMAN.)

For many years I have often been solicited and urged by Farmers, Planters and Merchants, to open in Baltimore a

PURCHASING AGENCY OFFICE,

in connection with "THE MARYLAND FARMER," for the purchase of AGRICULTURAL IMPLEMENTS, SEEDS, FERTILIZERS, &c., &c. It is thought an agency of this kind would be a great convenience and benefit to the Farmers and Planters if managed by a person of practical knowledge and experience in this line of business. Having been engaged as a manufacturer and dealer in Farm Implements, Seeds and Fertilizers, in Baltimore for more than thirty-five years, I am familiar with the wants of the farmer in every location in Maryland and the Southern States, and my connection with "The Maryland Farmer" together with the manufacturing business, has enabled me to become acquainted with nearly every manufacturer in this line of business in the country, and since I have decided to devote more of my time to the business management of the Journal, I have also concluded to favor my friends and patrons with an office of this kind.

Circulars giving terms and full particulars of the Agency will be published in a few days, and will appear in the next number of The Maryland Farmer. With an extensive correspondence with manufacturers, I will be able to make purchases and fill orders at prices more favorable to the farmer than he can procure in any other way. The purchaser will have the advantage of my long experience in this line, as we will in all cases collect our commission from the manufacturer.

Drafts or instructions to draw at sight on shipment, will be received in payment of purchases, in towns where there is a bank or banking house of good standing.

E. WHITMAN,

Publisher Maryland Farmer.



THE MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

Vol. XIV.

BALTIMORE, SEPTEMBER, 1877.

No. 9

A Cry for Bread, and a Cry for Labor.

For the first time in the history of our Republic, this Communistic cry has assumed sufficient volume to be noticeable by those who rule the Press, and those, who, more or less, control public sentiment. It is not our province, nor do we ever desire to enter upon either political or religious questions, or take sides with one party or another, or, with one interest that may seem antagonistic to another; yet, as public journalists, in times like the present, when we hear that appeal to the public passions, and the most dangerous impulses of the human heart, we, as one of the professed champions of the *bread*-producing classes, feel that it is appropriate to say a word, not to inflame, but to assuage the present state of irritation on the part of the whole people. In doing so, we do not array ourselves, either for *labor* or *capital*.

We cannot, however, fail to see, that the recent Railroad strikes are but the beginning of a struggle that is to end in an unhappy, disastrous issue between labor and capital. Were it the simple result of an honest contest between two interests so intimately connected, yet seemingly antagonistic, it might result in benefit to the universal health of the body politic. Honest labor, faithful labor, would receive its full pay from Capital, after a calm, dispassionate interchange of views, and the array of facts on both sides. We believe that "the laborer is worthy of his hire," but we do not concede thereby, that the laborer shall dictate what his labor is worth, and further, we think that no set of men have either legal, moral or common sense right, under the established law of Society and civilized government, to say that because *they* do not choose to work for certain wages, under certain conditions, that no other freeman shall do so. Such a course is ruinous to themselves—to the nation, and to Society. It is a Pandora's box from which a multitude of ruinous consequences must inevitably ensue if carried into practice. We agree that any and every man has the moral and

legal right to "strike" for higher, or resist a lower rate of wages. It is his inherent right—we are for it, and its maintenance. But we are certainly among those who deny that the malcontents have the right to prevent others who choose to accept the places they have vacated.

There is nothing, therefore, we think wrong in men declining to work, except on certain conditions. This is a peaceful form of forcing capital to be locked up, or to compromise with labor, or perhaps to enable capital to give employment to many who are really suffering through their inability to get work suited to them—perhaps the only sort of work they are fitted for. It may be, that in this latter aspect these "strikes" will prove the means of giving bread to such, if any, as are *really* starving, and anxious to earn an honest living.

It is not for us to say, whether the wages paid for certain labor are too low. We only say that we think such differences of views between employers and employes, could be amicably arranged if both sides are reasonable and sensible. We do say, however, that strikes in the general are pernicious examples—mislead youth, and are taken advantage of, by the idle, vicious and worthless, who constitute the mob material, to commit atrocious acts, and if not checked with prompt severity, would soon culminate into similar horrors, that the false cry for BREAD produced once in France, the reading of its history makes one's blood turn to ice, even at this distant date. It is not the right of the laborers to say that the chief officers of the company, or the boss of a factory, or on a farm is paid out of proportion, if they themselves, get all that they contracted for. The good Lord establishes this when he likened the kingdom of God, to the householder who hired laborers to work in the vineyard through the whole day, and paid them no more than those he hired to work for one hour only. When they complained of this injustice, as it seemed to them, the good man of the house said to one of them, "Friend, I do thee no wrong; didst not thou agree with me for a penny? Take that thine is, and go thy way; is it not lawful for me to do what I will with my own? Is thine eye evil, because I am good."

But is there any starvation for bread in this land which teems with all the substantial food required by mankind for not only comfort but luxury? So abundant is meat, bread, fruits and vegetables, that the farmers, after paying high wages for his labor in the production of these articles, really in most cases, finds himself out of pocket; and many a farmer at the end of a year is worse off than either of his help. Thousands of acres of land, once in cultivation in the old States, are lying idle, and going to waste for the want of labor to make them productive. Hundreds of different industries and employments connected with the trades as well as farming in the Middle and Southern States are languishing, if not paralyzed for want of labor, while tens of thousands of strong, hale fellows are tramping over the land, crying aloud for BREAD, and saying they can get no work, when in every case work is offered they refuse it with insolence and threatening abuses. Let them be everywhere taken into the hands of the law, or they will give great trouble by seizing upon any and every disagreement between honest industry and its employers.

Such is at present the stagnation of trade, low prices of products, embarrassment of manufactures, inactivity of commerce, restless discontent and indifference to get work, on the part of the negroes, and the ordinary white laborers, that it is almost suicidal for the farmer to continue present wages for such careless and uncertain labor, and it may be that other employers in other avocations and callings, find the same difficulty in giving high wages, or even such as are satisfactory to skilled labor. But, thank God, we are not yet at the starvation point, and in a country like ours, never can be, with the millions of untilled acres blessed more than any other land, by a beneficent Providence. Opposed to this sudden cry for bread, the loud, well founded in truth, cry for "labor," comes up from every broad savannah, and every valley in the whole land. Why then, we ask, do not these starving, dissatisfied and idle men, who say they are starving, at once respond to the call for labor, go to the country and earn their living by honest labor as so many noble hearted yeomanry are now doing? Why do they congregate like drones in city hives to interfere with the industrious mechanics and laborers who are trying to live by diligent attention to their work, patiently awaiting better times? Why are they allowed to stand idly in the market places and breed contagion and foster discontent, in hope, a reign of terror may break out, and end in a carnival of blood and anarchy with all morality, law, civil and religious liberty, and every vestige of personal security and rights of

property, trampled in the dust and crushed out.

We feel sure, however, things will come right yet, through the intelligence, and "sober second-thought" of the industrious, respectable class of workingmen in the cities, and the reflecting, calm judging capitalists, and also by the influence of our noble army of farmers, who at last are the back-bone of power, the bulwark of society and the wealth of the Republic.

We may have occasion again to refer to this subject, as we think, that, as a class, our agriculturists have a deep interest in the matter.

In the meantime, we commend to their attention, particularly to the young men of the country, the article which follows this, that we copy from a valued exchange, the *Sunny South*, which seems germane to this question of "bread" and "want of employment." We have presented heretofore in the MARYLAND FARMER views very similar when advocating on sundry occasions, *the dignity of labor*.

GENTEEL WORK OF A "SITUATION."

A prodigious amount of laziness, false pride, and greed are concealed under this phrase. Many thousand hands are to-day idle, waiting for something to do. And, in spite of commercial depression, the country has work waiting for a million hands. The farmers are calling for help; the trades are deficient in first class workmen; our kitchens are poorly supplied with domestic service; and the market place is full of the unemployed. Why?

If a merchant advertises for a bookkeeper, a hundred competent persons step forward at once. If an author seeks for an amanuensis, he must choose between as many eager applicants. Every Government officer who controls the appointment of clerks has more names on his list than there are details in a month's work.

The demand for something that will not soil the hands, that will not start perspiration, that will secure a livelihood without involving much exertion. Genuine hard work is regarded as semi-respectable. Men do not seek work: they look for a "situation," in which they may avoid work. They do their best to maintain the appearance of enjoying elegant leisure. But if an absolute sinecure cannot be found, they endeavor to give their employment an air of dignity, of repose, of freedom from homely fatigues. In a word, they seek "a light business."

The false standard of respectability indicated by the word "genteel" degrades manhood. Young men are ashamed of that which should be their glory. It is not he who does the least in his daily avocation, whose business involves the least display of strenuous effort; it is not he that is most re-

spected. The salary without real labor is a disgrace. Partial idleness, however concealed under a show of business, is a misfortune and, if purposely indulged in, a shame not to be countenanced. Clean hands that will not engage in genuine labor are already out. The refinement that draws back from manual employment and prefers mental dawdling is a sham, and should not have social recognition. Better be a grimy blacksmith, doing thorough work, than a titled officer enjoying a large income as a return for nominal services. Better be a day laborer than a pensioned loafer. Better be earning a comfortable livelihood by the sweat of one's brow upon the farm, or in the kitchen, than depending on the uncertainties of deskwork in an overcrowded city. Better be a simple carpenter than a hair splitting scribe or pharisee.

We wish this evil of "genteel" laziness might be exorcised, driven out of common conversation, expelled from popular thought, and cast down from its shameful throne of power. Its sway is anti-christian, and its cry is the old one: "What have we to do with thee, thou Jesus of Nazareth?" There is not a "genteel" idler in the land who does not wish to be let alone. They ought to be stirred up.

FROM FLORIDA—FRUITS, &c.

The following letter is from a highly educated and intelligent gentleman of careful observation, and who has visited all portions of our country, rendering his views reliable and instructive. He made his home, a few years ago, at Tampa, Florida, where he still resides.

LIMONA FARM, TAMPA, FLORIDA,

July 14th, 1877.

MESSRS. EDITORS:—The receipt of the July number of the MARYLAND FARMER induces me to believe that a word from Southern Florida, would be acceptable. And as that number shows nothing from any one so far South, I am the more disposed to write you.

The year thus far has, according to the record of the "oldest inhabitant," been unusual. Opening with more than an average degree of cold, the rains fell in undue quantity, during winter and March. The lemons, limes, citrons and guavas were damaged in the trees, but they are rapidly recovering. The orange, shaddock and grape fruits will give their usual supply, and Tampa may be estimated for 3,000,000, not including the 1,000,000 each from Clear Water and Manatee, of the best oranges in Florida.

The dry season which usually begins in March and ends with May, this year began after the middle of April, and lasted till the 20th of June. This damaged the corn planted in January, and gave an unusual degree of heat in June and first of July. Corn planted in March has made, except drying off, and is, above an average yield. Enough has been made, if it can be saved from the weevil, for the use of our people.

I find from my correspondence that many errors, as to this region prevail. Our high average temperature of 72 degrees, is the result of a high average for winter, and a long summer, not of its great heat. This summer, which that "oldest inhabitant," says is the hottest known, has only given a mercurial marking of 94°, and as the rainy season is here, no days as hot need be expected. I doubt if any other place can show a more pleasant climate. The nights are always cool, and sleep refreshing. breezes always fan us by day.

The breadth of land on which fruits may be grown is far less than is generally supposed. This is owing to the peculiar geological formation of Southern Florida. The whole may be called flat, more so than the great plains which look towards the Rocky mountains. The whole is built upon a bed of disintegrated shells, formerly the bed of the ocean, which is nearly impervious to water. Upon this, the sand is piled from one foot to forty, and the summer rains reaching to five feet or more, are poured on this land, without proper drainage, and consequently more than one-half of this county is either covered with water, or it may be found at two feet beneath the surface. While these lands might be sufficiently drained to produce corn, sweet potatoes, rice, &c., the orange cannot be grown on them. The sweet orange, shaddock and grape fruit are tap-rooted trees, and no man should attempt their growth on land where water can be procured, or the marl bed can be struck at six feet from the surface. The sour orange, and lemon can grow in shallower soil. From my own observation, and information considered reliable, I estimate for this county, Hillsborough and Polk, not to exceed one acre in forty as first-class orange land. Commencing eight miles east of Tampa and extending sixty miles, and varying from eight to twenty miles in width is the largest and best tract of fruit land in southern Florida, the Little Hillsborough, Alafia, Little and Big Manatee, Peace and Kissamee rivers, and a large number of creeks take their rise in this tract, from innumerable lakes, and marshes, so not more than one-third of this tract even, can be considered orange land. Probably 15,000 tracts of 100 acres each may be selected in bodies, on it adapted to fruit culture, and as many more tracts

varying from five to forty acres may be found. Beyond this belt, no tract of fifty acres of good land can be found south of the 28th parallel, on the western coast. Numerous small tracts of a few acres can be procured. Before these lands can be utilized, conveyance by rail is requisite, water communication, internally is out of the question.

This region is below the heavy frosts, and the oranges grown here are far superior to those farther north, and must always command a better price.

For these reasons, it is safe to say, if every acre of land adapted to the culture in western and southern Florida were to-day planted in oranges and the other citrous fruits, guavas, bananas, pineapples and other semi-tropical fruits, the markets of the world would be unsupplied.

This belt of land, is a sandy loam, colored with iron, of a yellowish red, and easily worked. The water in the wells is generally pure, soft and clear.

Malarial fevers are scarcely known, and vegetation never ceases its growth. Mosquitos, sandflies, and other biting flies never trouble men or beasts, as in most other regions. I attribute much of this freedom to the unusual numbers of the dragon flies, and other insectivorous flies and bees. Poisonous snakes, scorpions, &c., are seldom seen. I have killed but one rattlesnake in a year and a half, and have not seen or heard of a centipede or taranta. The flat woods and tide waters are to be avoided, on account of sickness, and noxious flies.

Land is now cheap. Governments, can be obtained only under the homestead acts. State lands vary from one dollar to seventy-five cents an acre. But unless I greatly mistake, in the course of three or four years, no choice locations for fruit culture can be had from either the United States or the State, and then such lands must greatly increase in value; and lands in Southern Florida equal the lands of any State in the Union.

J. G. KNAPP.

THE CLIMATE AND AGRICULTURAL PROSPECTS OF TEXAS.

The climate of Texas is all that could be desired. The summer is long and sometimes uncomfortably hot, but the nights are always cool and the sleeper awakens with a sense of perfect rest and refreshing. The winters are short and mild. Snow is rarely seen upon the ground. The grass-eating animals subsist on the forest grass without hay or grain. Most Northern people believe Texas to be a very dry country. So it is, but the seasons are rare that do not have rainfall enough to make a fair crop. Under this Southern sun, crops mature early. The

wheat is harvested before the drouth sets in. Oats and barley are generally sown in February and early March, and get a handsome growth before the dry weather can seriously affect them. Corn is longer in coming to maturity, but it takes deeper root and will never fail of a moderate crop with good culture. This is not so good a corn country as Kansas, Nebraska, Iowa and Illinois; but 40 bushels per acre are very often obtained, and with about one-half the labor given in the great corn States. The last two years have brought North Texas a generous crop of corn. Cotton never fails. Intelligent culture always brings a good crop. Northern Texas is the only country where all the staple cereals are successfully grown in the same field with a bountiful cotton crop. They bestow less labor on crops here than in any country I have ever visited. The primary reason for this is that the land is free from foul and noxious weeds. The dryness of the climate is a great aid to cultivation. The second reason is that the soil is as generous as any under the sun; the last reason is the universal indifference of the old Texan to thorough culture. He depends upon Nature for three-fourths of his crop. She is bountiful here and rarely deceives him. He is willing to work a *little* to aid her, but thorough cultivation of the soil has never been his study or habit. He skims over the surface and stirs the soil just enough to cover his seed. Deep tilling will work a transformation in Texas farming as the lands become valuable enough to compel it. A grand day awaits the coming of thorough husbandmen in Texas. In justice to the climate I may say that, without doubt, cases of incipient consumption, bronchial difficulties many conditions of catarrh and acute nervous affections, with most forms of kidney disease, will find relief here. This is a superb country for mixed farming.—Editorial correspondence of Chicago *Commercial Advertiser*.

A NEW ENEMY OF THE CORN CROP.—A large and exceedingly promising field of corn belonging to Mr. Wm. H. Waters, near Fallston, has been almost totally ruined, it is feared, by the attack of insects hitherto unknown in this region of country. A fly deposits an egg on the blade above the shoot; from which a worm is hatched, which crawls into the shoot, and feeding upon it destroys it entirely. No other corn fields in the neighborhood have yet been affected in this manner. If any of our farmer friends have had similar experience with their corn crops, and can suggest a preventive, we hope, for the benefit of the public, they will make it known.—[Ægis & Intelligencer.]

*Agricultural Calendar.***FARM WORK FOR SEPTEMBER.**

This is a busy month for the farmer and the busiest for the planter. Fruit to be gathered, extra care given to stock; land to be fallowed for wheat; rye to be sown; corn to be cut and secured in shocks; tobacco to be housed and kept clean of worms, tops and suckers, besides other small jobs necessary to be done on the farm. We ask attention to the few suggestions following, first as to

WHEAT.

The seed ought to be selected or procured at once; it should be of the best, purest, cleanest, plumpest, most prolific and heaviest that is to be had, and sown at the rate of 5 pecks per acre, if drilled, and 6 pecks if by hand. A good timothy or other grass turf or clover lay is best for this crop if the land be in good condition, and the ground plowed in time for the turf to be rotted, or nearly so, when the wheat is sown. Plow 6 or 8 inches with rather flat furrows and followed by the drag or Thomas Smoothing Harrow. Never cross plow if possible, or disturb the turned under turf, but keep the ground clean and pulverized by the frequent use of the drag or cultivator until the wheat is sown. At the last dragging sow 200 pounds of phosphatic fertilizer, and 100 or 200 of bone-meal or fine ground nitrogenized bones, then drill the wheat and roll. Wheat wants a fine tilth, firm soil and clean land.

Tobacco is a good preparatory crop for wheat if it is well plowed before being drilled, then also highly fertilized and heavily rolled. It is foolishness to sow wheat on poor land—on badly prepared land of any kind or after a corn crop, in the style most fashionable in the Middle States. It don't pay at all and the slovenly, unprofitable system or rather, bad habit, should be abandoned.

The seed should be soaked a few hours in brine, with copperas or sulphur and well stirred in the steep, and the scum or defective seeds that rise to the surface carefully skimmed off. Then drain it, spread on the barn floor and dry with slacked lime or plaster. It should be sown soon or immediately after being rolled in the plaster or other material, while the same sticks to the grains. The soak or steep can be made of salt or ashes or both,—lime water, 4 ounces of sulphate of copper, (blue vitriol) *not green* vitriol, to each gallon of water. The steeps of either sort should be strong enough to bear an egg. They are all excellent to hasten the vegetation of the plant and stimulate growth, and the vitriol preparation is considered a sovereign

preventive of smut and the fly. Where the fly has not been troublesome for some years, we would recommend early sowing as best for insuring a good crop. It is thought that late sowing will prevent fly, or avoid its ravages; but you are likely to encounter thereby *rust*, and besides we have seen late sown wheat entirely destroyed in April and May. The fly is mostly destructive when the wheat stem is making its second and third joint.

Be sure and have a sufficient quantity of water furrows to carry off surface water, that is in excess at anytime, and see that the whole field is properly drained, by open or blind ditches, or both, where required.

RYE.

The same remarks and suggestions apply to the rye crop, except that it will do well after corn, if the ground be properly prepared. Rye does not require as rich or heavy soil as wheat. A light sandy soil, well cultivated and aided by some manure or fertilizer will bring a good crop of rye if sown early, when the same land under like conditions would not produce a paying crop of wheat.

ROOT CROPS.

It is presumed the beet, mangold, carrot, and parsnip crops have been laid by, but they should occasionally be hand wed, and the ruta buga and turnips ought to have the ground kept porous, and free from weeds and grass. Sprinkle the plants often with ashes or plaster, or the two mixed.

Potatoes should get their last working, and kept free from bugs. The early planted if not dug before, may now be dug, and sent to market, after culling them carefully so as to present in each lot, uniformity in size and if possible in form. It is surprising what a difference there is in looks and in price between badly assorted and skilfully culled lots of potatoes. Small potatoes uniform in size and form, and clean will often bring a higher price than much larger ones badly fixed up with here and there a small half ripen one. The buyer seems only to see these exceptions, overlooking the many superior bulbs. It pays well to cull judiciously all vegetables and fruits, especially potatoes and tomatoes, making two or three different assortments. When sold the general average price will be much greater than if all were indiscriminately mixed and sold. We know this, and think it proper to call attention to it. It is neglected too often, and some say it does not pay, but it does.

CORN.

Cut off the corn close to the ground, as soon as the grain is well glazed and the milk is out of it; before the fodder dries and blows off. Carefully

put it up in shocks of good size, say about 100 stalks in a shock, well secured at the top by a straw rope or withe of corn tops, and splayed at the bottom to be self supporting and not easily blown down. Let the shocks be in straight rows, the rows about 40 to 50 feet apart.

TOBACCO.

Let the tobacco have plenty of room in the house to keep it from sweating. After it is partly cured it can be rehung closer to make room, and also to keep out damp air. Too much care cannot be taken in handling this crop at this stage, to prevent bruising, tearing heating, keeping clear of worms and suckers, &c. After cutting let it wilt well before handling, but in a hot sun it will soon burn, so that it ought to be picked up and laid in small heaps of 8 or 10 plants, enough for a stick before it burns; lay the heaps with butts of plants with the sun.

Ground leaves and those that fall off in moving the tobacco are usually picked up when wet with dew, and put in piles to mould and sweat until convenient to tie up. This is wrong. Let them become partially dry before gathering. As soon as gathered spread them thinly over a scaffold of sticks or planks, and in a day or two they will do to tie in bundles, when they are not too dry so as to crumble, nor too wet, so as to cause them to rot in the head of the bundle.

Experience will soon teach the beginner, the proper state in which they are fit to be tied in bundles. But a tobacco crop properly managed, by being topt low and pruned while growing of the bottom leaves, will have but few ground leaves when housed. Indeed as times are with labor scarce and high, we hardly think saving ground leaves will pay the expense and trouble, unless it be one of those peculiar seasons we sometimes have in August and September.

ORCHARDS.

If you are going to set out an orchard this year, select your lot, manure it well, and plow it up deep, so as to have it ready for digging holes and planting the trees next month. Prepare a compost heap for mixing with the earth about the earth as the trees are planted.

This compost may be made of 5 parts, fine mould or woods earth, 1 part ashes, and 2 parts fine ground bones or bones dissolved in sulphuric acid. Moistened with soap suds or liquid manure, and turned over several times, so as to become well intermixed. We shall have something to say about planting the trees next month,—yet, just here we would say, that we would prepare to plant apricot, quince, cherry, plum, the peach and all the small fruits in the spring; but they can be planted next month with safety, and if not then done, while you are in the humor and have the time, perhaps they will not be in spring, when work will be very pressing. So, if you are ready and willing, as you ought to be; if you are scarce of good fruits, pray do not let this suggestion of ours stop you in your good work, for many orchardists prefer autumn planting. Then go ahead!

GARDEN WORK.

GARDEN WORK FOR SEPTEMBER.

The gardener will find comparative leisure this month and has time to get the walks in good order, to destroy weeds and put them in compost heaps with ashes, wood's mould and soda, manure, plaster, salts, and soap-suds to hasten decomposition. *Lima Beans*, should be saved as they ripen.

Snap Beans, may be sown early in the month, for pickles and late table use.

Turnips, sow rather thick, a bed of turnips to stand all winter and furnish "tops" for early spring greens.

Salads, make the last sowing of lettuce, and be sure to sow a large border of corn salad in drills. It is a delicious winter and spring salad.

Brocoli and Cauliflower plants set out in beds, and cabbage plants also during the month, for spring use.

Garlic, shallots, leeks, and horse-radish may be re-planted in rich, well prepared beds.

Celery; commence earthing up the celery, and endive or other crops that require it. Sow a small bed of Spanish or Chinese radish. Thin and weed late beets and carrots. Keep all the growing crops clean and friable, and do not let them suffer for water should the month be dry.

Parsley and other herbs, if strong and luxuriant, cut rather close to the ground, dry in the shade and put away in paper bags for winter. If the ground be dry, as soon as cut, loosen the ground about the roots, and remove all the weeds and grass from the beds, then give a good watering with a sprinkling of plaster and slacked ashes; the plants will again begin to grow and branch out.

Cresses, chervil and other salads sow this month.

Cabbage seed may be sown at once, that the plants will be ready for setting out next month.

Cauliflower seed should be sown, if not already done, to have plants set in cold frames in November.

Strawberries. If you have not a plenty of this fine fruit, prepare a bed at once, get choice varieties and set them out.

Budding and inoculation of fruit trees ought to be expedited.

Raspberries, currants and gooseberries toward the end of the month, may be easily propagated by layering or cuttings.

Seeds, of all kinds as they ripen, be gathered dried in the shade, and when fit, rub or beat out the seeds, clean nicely and put away in small bags in a safe place or hung up to be secure from mice and insects.

Spinach. Sow early as possible a large bed in drills of this wholesome and delicate vegetable for late winter and early spring use.

“WOODMAN, SPARE THAT TREE”

The English are a land-loving and country-loving people, and it was not an unnatural mistake that one of the speakers made at a dinner of the Royal Agricultural Society, when he alluded to that fine old English song, “Woodman, spare that Tree.” The song is written in good English indeed, but it is an American song, and *that tree* that was to be spared is an American tree. In other words the invocation, and the warning, was intended for Americans, and it is he who should give it especial heed.

Yet it would seem to be only the fancy of the poet that a man could be brutish enough to destroy a fine old tree or thrifty young one unless under the pressure of some urgent necessity. Around the country home, trees are more than ornamental and useful; they become to us as companions and friends, and it is a murderous hand that would strike them down under the plea of some use or profit to be made of the dead wood. But this is the sentimental side of the matter. What we purposed in introducing the subject of trees, was to direct attention to the very practical and utilitarian view of it, the protection and preservation of our forests and their renewal by planting.

In the past times of our people, there has seemed to be so little necessity for care in this respect, that we have not yet gotten rid of the national habit of slaying our forest lands, which settled upon us in the early years of our national life. The effect has been the opening of vast tracts of woodland, that fresh soil might make amends for wasteful and destructive methods of cultivation. Intelligent observers are noting now the evil influences of this waste, not only in the rapidly increasing scarcity of valuable kinds of timber, but in its effects upon the climate and the rain-fall. So urgently has it been impressed upon the Legislature of the State of Massachusetts, that the State is now offering handsome premiums for the encouragement of planting the most valuable sorts of timber. There is little difference in the circumstances of the case between Massachusetts and Maryland, but here the subject has received little attention and we are therefore less alive to its importance. Where there are small remains of original timber lands, and destruction is constantly going on without any effort at renewal, it is plain to see what the end must be sooner or later.

Nor may we flatter ourselves that land thrown out of cultivation and left to a state of nature will reclothe itself with valuable timber. To some extent it may do so, and it is one of the follies of our

inattention and indifference to the subject, that often, there is needed but little help from us to protect what is good against what is worthless in the natural growth, and to supply deficiencies where needed, and we fail to give that little. A great deal may be done in this way at very little cost.

But especially should we give the matter of increasing the most valuable kinds of timber native to our soil and of introducing others that are of known value elsewhere. Our walnut, yellow poplar, white oak, hickory, locust, chestnut, and other sorts, are familiar enough and can be continually increased at almost no cost; but there are others, such as the white ash, the Scotch pine, the European larch, not so well known here, that are of great value and could be most profitably introduced in considerable plantations.

The white ash is known to be especially valuable where toughness and elasticity of fibre is needed. Professor Sargeant says of it in the *Massachusetts Ploughman*, “I am fully convinced that those who plant and care for the ash are sure of their reward. I am informed by experts that the ash is in more demand, and commands a higher price, than any other wood that is indigenous; that the fibre of the ash grown in the New England States is tougher and has more substance than ash grown elsewhere, and that the demand is constantly increasing. During the Centennial Exhibition our woods were closely examined by foreigners, and now foreign orders are rapidly coming in, and every vessel leaving Boston for a foreign port is taking out large quantities of ash and walnut.” The Massachusetts Society for promoting agriculture, appreciating these facts and the rapid decrease of the more valuable kinds of timber, have offered such premiums as the following, to be awarded in 1888, and open to all landholders within that State:

For the best 5,000 white ash trees, \$250,00; next best 5,000 white ash trees, \$100,00. For the best 1,000 white ash trees, \$100,00; for the next best white ash trees, \$75,00. They are to be new plantings, of course, and may be in groves or scattered. Similar premiums are likewise offered for plantations of the white pine, Scotch pine, and European larch.

We cannot too urgently press this matter of the forest growth, especially upon the consideration, of the more Southern and tide water regions of the State. It is only second in importance, to that of our fish and oyster interests, that of late years are receiving some degree of intelligent attention. Heretofore, in both cases, there has been not only free use but lavish waste and destruction, and both, now, demand alike, individual and public care, lest in each we come, in the remote future, to grievous want. We must not only “spare the tree” we have, but increase the goodly company of trees for the profit as well as the adornment of the noble inheritance of land our fathers have left us.

Enriching the Land.

There is nothing that has tended so much to disgust our young men with country life, and to drive them away from their homes, as the grievous inheritance of poor lands on which they have fallen. Even debt with its attendant embarrassment, does not happen to be the fate of such, the discouragement and the heart-failing that come, in every season from disappointed hopes, and unfulfilled expectations, drive them sooner or later from the ills they have to those that they know not of. And it is perhaps the most enterprising, and those whose talents and energies, well directed, would do most good at home, whose impatience soonest prompts them to other scenes of industry.

The interest which attaches to fair and steady return of faithful labor, which is almost sure on well enriched lands, and to well-fed flocks and herds, and the various comforts of country living, would retain hundreds of the best of our youthful population who now crowd the streets of cities, to their ruin. No subject, therefore, should be so earnestly studied, or should so heartily engage the attention of agricultural journals and associations as this, because it lies at the bottom of that country life which is the best life of the State.

An intelligent writer on the subject of enriching land, says very justly in the *Utica Herald*: "Large crops are not always paying crops. They are too often, a loss to the grower, having cost too much in manure and labor." This is, no doubt, true, and the premium crops, on which our agricultural societies spend a good deal of money, help to make a show, but are of little value as examples. What we want, is, not the biggest crop that can be made from a given surface, but the crop that pays best for the labor and capital used in its production. This will not be found often to be the result of heavy manuring and extra labor for the crop, but of that wholesome condition of the soil which makes it almost a sure thing for a paying crop, even in unfavorable seasons, whether of too much or too little rain. A clear distinction should be held between the two distinct things of cropping and enriching the land. There are those who think we are approaching the stage of progress in science applied to agriculture, when we may apply to any given soil, just so much and no more than the crop may need of the elements of nourishment. But we have not reached it yet; and valuable as our special fertilizers are as aids to improvement, and to crop-growing, it is a very unsafe policy, which relies upon them for yearly returns of crops of grain, tobacco and cotton, instead of using them to bring about

that improved condition of the soil that is the result of careful and thorough cultivation under a good system, with grass-growing and stock feeding. This condition is well expressed by the writer before quoted, as follow :

"We have all to come to this, a knowledge of how to improve our land, and keep it from becoming impoverished. Poor farming will not pay—less now than ever. The safe way for the less informed, is to have the land rich and in good condition. Remember, manure is life in the soil, without, the land is dead. Manure warms the land, loosens, mellows and prevents it from getting hard and cracking in the drouth; retaining moisture the better, and passing off more readily, a surplus of water; resists, to some extent, the frosts, so that winter crops are more safe, less affected in the Spring by freezing and thawing, and is always a safe fund in reserve. You can have no better property than rich land, accessible to market. To make it rich and put it in balance, requires, sometimes, considerable art, but, once obtained, a rotation of crops, with dependence upon farm manure; what the stables make, and what is furnished by the sod and by clovering and other green crops, will keep it in condition, make easy working and reliably productive. To get land up to this point, and keep it there, should be the aim of every farmer, who is not already in possession of it—It is undeniable that there is a secret of success in old, rich soils, ripened by time, and a greater satisfaction results from their cultivation than from the employment of commercial stimulants, ephemeral in their nature. Those old soils never fail to respond, the stimulants often do. It is this well enriched, and well ripened soil that is wanted for general farming. We are getting it through the dairy and the raising of clover."

A wealthy man in Indiana lost a thousand bushels of wheat through the work of grain weevils; but if somebody had asked him to pay \$2 for a book on noxious insects, or subscribe for an entomological paper, he would have indignantly refused to do either, and considered himself "smart" in refusing.

It has been calculated that a good sized elm, plane, or lime tree will produce 7,000,000 leaves, having a united area of 200,000 square feet. The influence of such a large surface in the absorption of deleterious gases and the exhalation of oxygen must therefore be of immense benefit to overcrowded and unhealthy districts.

For the Maryland Farmer.

Soils Fit for Plants.

Every farmer, who knows any thing about soils and plant growth, knows that river bottoms—alluvial soils—are the very best soils that can be, for rich, heavy growths; and there are two reasons for this:

First—this kind of soil is made very fine, thoroughly comminuted and mixed, by the action of water or floods which carry it along and deposite the drift of light, rich earth, when the flow of water subsides, leaving this kind of soil along the banks of the streams, loose and porous, so that the fine roots, as well as large ones, can penetrate and range through it freely for support and growth; whilst, also, the air can fully circulate to cause speedy dissolution of mineral and vegetable matters in the earth, and thus fit them for plant food, so that the roots can take them in to nourish the plant.

Second—These floods or flow of water gather and carry along in their course all the best ingredients—vegetable, mineral and animal matters—that are on or near the surface of the earth, on hills and slopes, from a wide range of surface, and deposite them within a narrow space, which makes a wonderfully rich and fertile soil, for the luxuriant growth of all kinds of crops. Now, *all* farmers well know, from experience, that these loamy soils, on the “bottoms,” are the most fertile and productive; but all do *not* know the *reason why* they are so; observation shows them it is so, but don't show the reason.

Hence, there are useful, practical lessons to be learned in knowing and looking at the reasons why river-bottoms are superior soils.

Since these alluvial soils are the very best form of earths for production, it is wisdom for the farmer to try, as far as possible, to imitate them—to bring as much of his land as he can into the same condition.

And how is he to do this.—how can he, artificially, put his land into the same productive condition which the action of nature thus does it for him?—

There are two essential things to do:

First—he must completely pulverize his land by fine, deep plowing, and thoroughly rolling and harrowing it, so there will be no large hard lumps, and in order that the air and moisture can penetrate and circulate through the whole of it, causing quick and full dissolution of the particles into such forms that the young plants can take them up and feed on them; for nothing is better known than that plants cannot appropriate any particle of the soil or earth to its sustenance and growth until it

is thoroughly *dissolved* and converted into a liquid state, any more than the food which a man eats can nourish and sustain him before it is fairly digested and converted into fluids, so as to be introduced by the various secretions into the different parts and organs of the human system.

Second—he must also introduce into his soils those mineral and vegetable ingredients which compose a proper *loam*, and make a similar mixture of earthy matter as that which composes the alluvial deposites along the streams.

A nice mixture or compost of common earths with lime, ashes (or potash), phosphates, and well rotted manure, marsh muck (or forest leaves) or any straw or grass substance, and the whole finely and completely mixed into the surface of the field, will constitute a fair and successful imitation of and substitute for the rich, productive “flatts,” along streams, so universally prized and sought by farmers. In short; a good, fine mixture of rotten vegetable matters with lime, ashes and phosphates into the common sand, with a deep, thorough pulverization of the soil, will give as fertile and productive soil as are the alluvial river-bottoms.

Spreading lime, ashes and phosphates (or ground bone) on green crops, as clover, peas, buckwheat, &c., and plowing them under so as to let them all rot, dissolve and mix together will produce the same results. The proper dissolution and mixture of all ingredients is what does it—that is sure.

D. S. C.

Buy none but the best land. Ten acres is better than a whole section of poor land.

Keep out of weeds.

Do nothing slipshod. Plow well and cultivate thoroughly.

Do everything in the right season.

Procure good implements and take care of them

Raise none but good animals suitable to country and climate.

Keep out of law.

When you go to town never sit down or stand around the street corners.

Never spend your time with patent rights or perpetual motions.

Keep strict account of income and expenses.

Keep out of debt.

Keep clear of security notes and out of rattlesnake dens.

Be charitable but pay your debts first.

HORTICULTURAL.

CURIOSITIES IN GARDENING.

Gardening, as well as literature, has its "curiosities," and a volume might be filled with them. How wonderful, for instance, the sensitive plant which shrinks from the hand of man—the ice-plant that almost cools one by looking at it—the pitcher-plant with its welcome draught—the hair-trigger of the stylidium—and, most singular of all, the carnivorous "Venus' fly trap" (*Dionæa muscipula*)

"Only think of a vegetable being carnivorous!" which is said to bait its prickles with something which attracts the flies, upon whom it then closes, and whose decay is supposed to afford food for the plant. Disease is turned into beauty in the common and crested moss-rose, and a *lusus nature* reproduced in the hen-and-chicken daisy. There are phosphorescent plants, the fire-flies and glowing worms of the vegetable kingdom. There are the microscopic lichens and mosses; and there is the *Rafflesia Arnoldi*, each of whose petals is a foot long, its nectary a foot in diameter, and deep enough to contain three gallons, and weighing fifteen pounds! What mimicry is there in the orchisses, and the hare's-foot fern, and the Tartarian lamb (*Polypodium Baronyetz*)!—What shall we say to Gerard's Barnacle-tree, "whereon do grow certain shells of a white colour tending to russet, wherein are contained little living creatures; which shells in time of maturity do open, and out of them grow these little things, which falling into the water do become fowles, which we call Barnacles?" What monsters (such at least they are called by botanists) has art produced in doubling flowers, in dwarfing, and hybridizing;—"painting the lily"—for there are pink (!) lilies of the valley, and pink violets, and yellow roses, and blue hydrangeas; and many are now busy in seeking that "philosopher's stone o gardening," the blue dahlia—a uselesss search, if it be true that there is no instance of a yellow and blue variety in the same species. Foreigners turn to good account this foolish rage of ours for everything novel and monstrous and unnatural, more worthy of Japan and China than of England, by imposing upon the credulous seeds and cuttings of yellow moss-roses, and scarlet laburnums, and fragrant peonies, and such like.

Strange things too, have been attempted in garden ornaments. We have spoken of water-works, like the copper tree at Chatsworth, to drench the unwary; and the Chinese have, in the middle of their lawns, ponds covered with some water-weed that looks like grass, so that a stranger is

plunged in over head and ears while he thinks he is setting his foot upon the turf.

In the Ducal gardens at Saxe-Gotha is a ruined castle, which was built complete, and then ruined *expres* by a few sharp rounds of artillery! Stanislaus, in the grounds of Lazienki, had a broad walk flanked by pedestals, upon which living figures, dressed or undressed "after the manner of the ancients," were placed on great occasions. The floating-gardens, or Chinampas, of Mexico, are mentioned both by Clavigero and Humboldt.—They are formed on wickerwork; and, when a proprietor wishes for a little change, or to rid himself of a troublesome neighbour, he has only to set his paddles at work, or lug out his towing-rope, and betake himself to some more agreeable part of the lake. We wonder that the barbaric magnificence which piled up mimic pyramids, and Chinese watch-towers, and mock Stonehenges, never bethought itself of imitating these poetical Chinampas. It was one of Napoleon's bubble schemes to cover in the gardens of the Tuileries with glass—those gardens which were turned into potato-ground during the Revolution, though the agent funnily complains that the Directory never paid him for the sets!

One of the most successful pieces of magnificent gardening is the new conservatory at Chatsworth, with a carriage-drive through the centre, infinitely more perfect, though, we suppose, not so extensive, as the covered winter-garden at Potemkin's palace of Taurida, near St. Petersburg, which is described as a semicircular conservatory attached to the hall of the palace, wherein "the walks wander amidst flowery hedges and fruit bearing shrubs, winding over little hills"—in fact, a complete garden, artificially heated, and adorned with the usual embellishments of busts and vases.—When this mighty man in his travels halted, if only for a day, his travelling pavilion was erected, and surrounded by a garden *a l' Anglaise*! "composed of trees and shrubs, and divided by gravel walks, and ornamented with seats and statues, all carried forward with the cavalcade."

We ought in fairness to our readers to add, that Sir John Carr, notorious by another less honourable prænomen, is the authority for this; though, indeed, his statement is authenticated by Mr. Loudon (*Encyc. Gard.* sect. 842).

We have heard of the effect of length being given to an avenue by planting the more distant trees nearer and nearer together; but among gardening crotchets we have never yet seen a children's garden as we think it might be made—beds, seats, arbours, moss-house, all in miniature, with dwarf shrubs and fairy roses, and other flowers of only the smallest kind; or it might be laid out on turf, to suit the intellectual spirit of the age, like a map of a state or country for instance, with its chief water course, &c.—[Quartely Review.

Planting Trees.

"Pioneer," in *The Prairie Farmer*, says on this subject: "I have transplanted many hundred forest trees in the last ten years, and I have rarely lost a tree, and most of them set in the Fall. One of the most important rules to be observed is, before taking up a tree mark it in some manner, so you will know which is the North side, so as to be able to reset it in exactly the position it grew in the woods. This may seem to many of no importance, but to those who know that there is in the bark and wood of all trees a radical difference between the North and South sides, the North side being close grained and tough, while the South side is invariably more open grained and brash, or soft, the importance will be seen. If this is done, your tree does not have to undergo a complete change in all the parts, and is ready to start off and grow at a proper time as readily as though it had not been moved."

Cloves.

Cloves are unopened flowers of a small evergreen tree, that resembles in appearance the laurel or the bay. It is a native of the Molucca or Spice island, but has been carried to all the warmer parts of the world, and is largely cultivated in the tropical regions of America. The flowers are small in size and grow in large numbers in clusters at the very end of the branches. The cloves we use are the flowers gathered before they are opened and whilst they are still green. After being gathered they are smoked by a wood fire and then dried in the sun. Each consists of two parts; a round head, which is the four petals or leaves of the flower, rolled up, inclosing a number of stocks and filaments. The other part of the clove is terminated with four points and is, in fact, the flower cup and the unripe seed vessel. All these parts may be distinctly shown if a few leaves are soaked a short time in hot water, when the leaves soften and readily unroll.

VERGILLIA LUTEA.—There is at this time, in this Nursery, a specimen of this tree, in shape a perfect globe, twenty-five feet high, and literally covered with white blooms, one of the most beautiful sights the eye of man could rest upon. The flowers resemble extra large clusters of well shouldered grapes, gracefully hanging from the points of every limb, the berries being the white pea-like blooms. The tree is rare and scarce, a native of middle Tennessee, where I found it in 1855. I am in great hope that it will mature seed, so it can be widely spread. Certain it can be seen only to be admired and never forgotten.—[Southern Farmer.

ORCHARD GRASS.

Orchard grass makes good winter pasturage—equally as good as blue grass, and far better pasturage in season of drouth than blue grass, as it is a deeper and larger rooted plant and resists drouth better. When once established, it can be fed as closely as any other grass, and is no harder on land than any other. Indeed, land pastured in orchard grass will continue to improve in fertility. If half of each of our farms were well seeded to orchard and other grasses, it would be of great advantage to them.

For pasturage, however, we recommend a variety of grasses, and thick seeding. Stock like variety, and thrive better on it. Each variety has its season of greatest excellence, and thus the best pasturage can be kept up throughout the year. The common red clover should be sown with the grasses for all pastures. It is a rank grower, and resists drouth admirably. We are glad more attention is being paid to pasturage. Improved farming can not be carried on without it, and in nothing are the majority of our farmers more neglectful than in seeding more of their farms to good pastures.

Now, that the live stock interests are beginning to look up, is the proper time to give attention to this matter.

Hundreds of tons of beef are going weekly to Europe in refrigerator ships, and it will not be long before America supplies a large part of Europe with meat. Hogs need pasturage, too, as well as cattle, horses, sheep and mules.—[Colman's Rural World.

PURSELANE—"PUSLEY."—How common, among farmers, is the expression—"mean as pusley." Well, this weed which is so troublesome, and is purselane, is a species of the portulacca. It is a sly little weed, creeping along on the ground, among the corn, potatoes and vines, robbing them of much rich nutriment in the soil. It bears a small yellowish blossom, and little egg-shaped pod, full of fine black seed, smaller than poppy seed, which, if not early destroyed, will soon overrun garden and farm. Now, if not already done, is the time to destroy it, and all other weed seeds, by pulling or raking them in piles and burning them on the beds where plants have been removed.

This despised weed has some fine qualities. It is relished much by hogs, and they fatten on it better than on clover. In its tender state, the leaves and newly formed branches are cut and dressed as lettuce, and is delicious; liked by all who ever tried it. We have. From time immemorial, this plant has been used as a salad and a *pot-herb*. It is almost as good for soups as okra. It is mucilagenous and with a pleasant mild taste. It is very wholesome.

Betula Alba Pendula Elegnas.

At the Paris Universal Exposition in 1867, this tree attracted marked attention, being exhibited there for the first time. The accompanying engraving gives a correct idea of its habit of growth. The branches run directly towards the ground, parallel with the stem. Its elegant pendulous habit, beautiful foliage and branches, entitle it to be regarded as one of the greatest acquisitions of many years in this class.

We are indebted to Messrs. Ellwanger & Barry for the above electrotype. The whole tribe of cut-leaved weeping birch trees, of which there are several varieties, are remarkable for their beauty. This old and popular firm of Rochester, were the first nurserymen who introduced this class of trees to the public notice. The horticultural writer, Scott, says of these trees.

"Like the palm tree of the tropics, it must be seen in motion, swaying in the lightest breeze, its leaves trembling in the heated summer air, its white bark glistening through the foliage and sparkling in the sun, to enable one to form a true impression of its character."

Tea and Coffee.

One of the the Philadelphia newspapers in an article against taxing or putting a duty on tea and coffee, gives the following figures and statistics, "showing the proportions of the consumption of tea and coffee per head of population in Europe. The table is an uncommonly eloquent one. Belgium consumes the most—16 $\frac{7}{8}$ pounds per head, and Russia, 1.32 pounds per head; France, 4 $\frac{5}{8}$; Italy, 1 $\frac{3}{4}$, and Spain, but $\frac{1}{4}$ of a pound for each individual. This shows almost at a glance, that those countries whose industry is the most thriving consume the most tea and coffee.

"By our own estimates of consumption, taking our population to be 44,000,000, we use 4 $\frac{5}{8}$ pounds of coffee, and 1 $\frac{3}{8}$ pounds of tea, as a yearly allowance for every man woman and child in the United States. We are about on a par with the Netherlands, as tea consumers.

"Looking then at the immense advantages to be derived from these mild stimulants, (and some kind of a stimulant is a necessity of human life,) may we not dread any financial measure, which may force our people to seek other substances, and supplant with alcohol our tea and coffee."

BOTTLING FLOWERS.

It was said in the *Evening Post*, in January, that a sprig of lilac, which had been placed in a bottle with warm water, the water being renewed two or three times a day, had thrown out clusters of white flowers at the end of a few weeks. The experiment need not be confined to the lilac; but if one will gather twigs of almost any of the ordinary garden shrubs and treat them in the same way, he will be rewarded by similar results. The forsythea will respond first, and at the expiration of ten days or two weeks it will be covered with lemon-colored flowers. In the mean time the buds of the Japan quince will be seen to swell, and 'ere long it will open its scarlet petals. The bladder-senna will send out its buff clusters, the weigela roses will give its pink and white trumpet-like flowers, and the red dogwood will slowly unfold its tufts of white. A wide-mouthed glass must be used, and the one best suited to the purpose is the ordinary preserving jar. Put in a number of twigs, but not enough to crowd them, and then fill the glass about one-third of tepid water, renewing it two or three times a day. Through the day the glass should stand in the sun, and it must remain at all times in a warm room. By cutting fresh twigs at intervals and starting them in other bottles, we may have a succession of flowers. In cutting from the Japan quince care must be taken to secure the buds, which do not appear on the extremities, but well down on the woody part of each branch.

VALUE OF NITROGEN IN FARMING.

Nitrogen is one of the sixty-three or more elements of which our globe is believed to be composed. Its great value to the farmer was lately discovered. All farmers had before profited by it undoubtedly, but their profiting was a mere accident. They knew nothing of its agricultural worth, or how they could avail themselves of its benefits, till Bousinggault, an eminent chemist, and still more eminent as a practical farmer, published to the world the results of his patient investigations. After long and continued experiments, both in the laboratory and in the field, he demonstrated that the highest success in agriculture cannot be reached without additional supplies of nitrogen over those furnished by Nature. All animal matter accidentally falling upon the soil adds to its nitrogen. Rain-water gathers nitrogen from the air in passing through it, and deposits it in the soil. Millions of insects perish in or on the surface of the earth, and thus supply nitrogen for the food of plants.— Other and very numerous sources of nitrogen are always supplying it to the soil. But neither these, nor all natural sources of nitrogen furnish enough, in forms available to plants, to secure the most profitable results. Hence the importance of preserving and applying the farm manures, not only for the nitrogen which they contain, but for their other fertilizing ingredients as well.

Of course the farmer who understands his business will be careful to preserve and apply all the barn, pen, and fowl manures. For like reasons, and for the purpose of preserving health in the family, the sink-wash, night-soil, and all else that is of bad odor, should be often and thoroughly transferred from the neighborhood of human nostrils to the soil, great consumer of all filth. Farmers are longer lived than other men, because they are much of their time in a pure, open air. Give their wives and daughters as pure atmosphere, and they will live as long, and be as brisk and as long lived. No dead animal, beast, bird, or fish, should be left to rot on the farm. If deeply buried in a compost heap, the nitrogen and phosphates in them will be worth much for the fields ; but if carelessly thrown out uncovered, they will only attract ravenous beasts and birds ; and these may too soon learn the resting places of your chickens, goslings, and young turkeys.

All wool flecks, bits of woolen cloth, hair, hoofs, horns, bonedust, scrapings of comb-factories, and all other animal matters, should be put into the compost heap, or directly buried in the soil. Don't leave anything that has worth for the soil to pollute

the atmosphere. It is languor, sickness, inefficiency and death to the family, but money in your pocket if thrown upon a large compost heap some distance from your doors and windows, and in due time applied to the soil. The things we have named, and others which are worse than thrown away, are worth for the soil all the way, according to size of family, from twenty to a hundred dollars a year, when rightly cared for ; nor can the farmer earn as much in an easier way—[Prof. Nash, in Evangelist.

UNDERDRAINING.

Below we give from the Maine Farmer some facts in regard to *underdraining* farming lands ; and we believe the operation would be as advantageous in Maryland as in any other State ; and we have no doubt that the increased product on every farm each year would be much more than the cost of making the drains :

“As an improvement worthy of mention I wish to tell you what has been done at farm drainage in a single district in this town. This is District No. 9, and there are on thirteen farms in this one district twenty-five hundred and seventy-eight rods of underdraining, averaging three feet square—for while a large amount is larger than this, a few rods are smaller. I give you below a list of the men on whose farms the drains have been built, the number of rods on each farm, and the cost to each farmer. The largest and most expensive piece is that built by William Vannah. The total cost of the drains was \$4, 957.50.

Phineas Benner,	305	610.00
Miles Hall,	70	140.00
Roscoe G. Winslow,	50	100.00
Joshua Benner,	304	608.00
Perry G. Hall,	60	120.00
Samuel Hall,	90	180.00
William Vannah,	270	845.00
William Benner,	200	400.00
NAME.	NO. OF RODS.	COST.
David Genther,	112	\$280.00
Same, (open drains)	313	156.50
Cyrus Creamer,	37	74.00
Cyrus Winslow,	75	150.00
Samuel W. Benner,	62	124.00
Geo. W. Walker,	20	40.00
Same, (open drains)	60	30.00
Gorham T. Eugley,	225	450.00
L. H. Winslow & Son,	325	650.00

The advantages to be derived from underdraining can only be understood by those who have tried it. All the above mentioned drains are under our very poorest land—or what was considered the poorest—but from having been drained it is now regarded as the very best. Brother farmers, go into it and after a few years' experience you will only wonder why you did not drain your land long before.

LYMAN H. WINSLOW.
[Nobleboro'.

For the Maryland Farmer.

DISTRICT COLUMBIA MATTERS.

*Potomac Fruit Growers—Horticulture for Children
—"Tunlaw Farm"—Pontederia.*

WASHINGTON, Aug. 9th, 1877.

On Tuesday, the 7th of August, the Potomac Fruit Growers' Association enjoyed its regular monthly meeting in a picnic excursion on the steamer "Mary Washington," down the Potomac river to Glymont, stopping at most of the stations. It was really one of the most enjoyable and interesting meetings that the Society ever had. The steamer, large and commodious as it is, was crowded with members and guests, whole families with their baskets of provisions and fruits. Capt. P. H. Troth, as he always does, was active for the welfare of his passengers. The day was fine, and everybody seemed happy.

The long tables, in the upper cabin, were loaded with choice fruits and rare flowers, arranged in handsome style by the good taste and industry of Mrs. H. N. Nute, who is always active on these occasions, and was assisted by Mrs. Lincoln, Col. Chase, and others—to show to best advantage.

John Saul, of the 7th Street Nurseries, was the largest exhibitor, of both flowers and fruits; he had between 50 and 60 varieties of *pears*, embracing fine specimens of all the best summer, autumn, and winter pears. He also exhibited some fine apples. His display of *flowers* was really gorgeous, including a splendid collection of gladiolus, of all colors; double tiger lilies, and many other rare plants.

Mrs. M. D. Lincoln, had a good collection of fruits, with a beautiful display of various flowers in handsome designs.

Prof. Wm. Saunders, of the Agricultural department, showed fine palms with other rare plants, and a splendid collection of foreign grapes. Gen. Le Duc, the New Commissioner, takes lively interest in these things.

Mrs. Harriet Nute, with her usual good taste exhibited fruits and flowers. Col. Chase, a fine floral design.

Virginia was also well represented with fruits and flowers, by Benj. Barton, Capt. Troth, Chalkley Gillingham, and others. Master Field showed a handsome floral design.

Judge Edmunds, Postmaster, of Washington; Col. Ed. Daniels, Maj. Hines, the Pitts and others, were among the visitors.

Dr. E. P. Howland, of Vernon Springs, attracted much attention by an exhibition of his swimming, life saving apparatus, plunging off the boat into the middle of the river and floating about safely.

BUSINESS MEETING.

A business meeting was held in the cabin, at which, C. Gillingham, President, presided and Dr. J. E. Snodgrass, was Secretary.

Among the communications read was one from the New Commissioner of Agriculture, explaining his very proper principle for the distribution of seed; which is—that those receiving them are to make fair experiments with their growth, and then report results to the Department; and parties receiving seeds and not complying with this will not be entitled to more seeds.

Next a useful little pamphlet was distributed to the audience, containing an excellent paper, prepared some time ago, by Chalkley Gillingham, on the favorable climate of the Potomac region for fruit culture. This paper elicited discussion and was ably sustained by both Mr. John Saul and Secretary Snodgrass, with timely remarks. The pamphlet also contains a useful address of Dr. John Brainerd, on the modes of preserving and canning fruits, in which metallic vessels should not be used.

Dr. J. E. Snodgrass opened the general exercises of this meeting with an able address showing the usefulness of fruit as food, and its healthfulness; and very properly showing that fruit should be eaten as a diet as well as dessert. Dr. Brainerd, and others discussed the subject, maintaining the dietetic and hygienic value and use of fruit.

Other speaking and declamation was had; together with some very pleasant musical exercises, vocal and instrumental, by Mrs. Daniels, and her little daughters, who sing beautifully.

The boat returned to her landing at Washington about 5 o'clock, with everybody pleased and happy—hoping for another similar excursion soon.

HORTICULTURE FOR CHILDREN.

Mr. Jos. L. Smith an intelligent and earnest friend of flower and fruit culture, of Washington, has often done much to encourage boys and girls to learn and engage in propagating fruits and growing flowers; he recommends that it should be introduced and encouraged in our town and country schools. Mr. Smith suggests that many of our rural schools should be made experimental stations, for testing and developing many agricultural and horticultural matters,—as is the case in many countries of Europe; and teachers particularly qualified should be selected, and they should have pleasant, permanent homes provided by the district or town. Mr. Smith furnishes me the following statements showing that these kind of schools and homes now exist in the rural districts of Austria, Brazil, Argentine Republic, Chili, Denmark, German States, Hungary, Norway and Sweden; and shall we remain behind all of them in educational progress, here in our new and free country, with rare privileges?

TUNLAW FARM.

This is the name of Col. T. L. Hume's handsome and highly cultivated farm, near Georgetown, D. C., where I had the pleasure last month of enjoying the cordial and elegant hospitality of his interesting family one day and night. The farm lies handsomely, with varied surface, of hill and vale, some of the more elevated points commanding picturesque views and overlooking Georgetown, the Capitol, the Potomac river and the Blue Ridge, while the pleasant and comfortable dwelling, dairy-house and out-buildings are located in a beautiful valley, surrounded by handsome lawns, flower gardens and other ornamental objects, all refreshed by several clear, cool springs that form merry rivulets, which run away off to the Potomac. Altogether, the place combines most of the more desirable charms and pleasures of both rural and city life.

Col. Hume cultivates and manages his farm in the same thorough, systematic manner that he observed in his large mercantile business, in Washington; and herein lies the useful lesson which a brief description of it will afford the careful reader. His lands are deeply plowed, cleanly cultivated, and richly fertilized, both by the application of various manures and by plowing-in green crops, as clover, orchard grass and other green crops.

He raises and feeds large quantities of roots, beets, carrots, &c., to his fine thorough-bred stock, which consists of fine horses, imported Alderney and Jersey bulls and cows; the best strains of imported Berkshire and Essex swine; with the most desirable breeds of fowls and ducks; all of which he makes pay. But my limits will not allow me to go any more into details of this fine farm and delightful homestead, which I would be glad to do and have still enough to say. May he and his accomplished wife live long and prosper.

PONTEDERIA, CORDATA.

People who have visited the Potomac and other rivers in the region, this time of the year, have noticed an attractive plant, along the borders, often among the rushes and the wild rice, which has a long stalk in the centre, and spear shaped leaves, crowned with a beautiful dark blue spike flower; it is locally sometimes called "Wamsetta," but the above is the botanic name; I make this statement, having frequently been asked for the name of the plant.

D. S. C.

KEEP FEEDING YOUNG CHICKS.—As soon as chickens are large enough to eat corn, do not restrict them to that alone, but still feed them, once a day at least, with soft food. This will aid growth and keep them in health. Hot weather is hard on them, and to keep them up it is necessary to feed them well.

THE DAIRY.

For the Maryland Farmer.

BUTTER DAIRYING.

BY D. Z. EVANS, JR.

To so conduct dairying as it make it pay a fair profit on the capital, and labor invested requires experience and an attention to details, without which success cannot be hoped to be attained.—There are some few novices, who attempt to establish a large dairy herd in a very short time, and expect to realize largely from the investment. Such attempts are generally accompanied by failure, for the growth of a first-class dairy herd is but slow indeed. Ask any of those successful farmers in Chester, Lancaster and Montgomery counties, Pa., how long it took to establish their present herds, or how long it would take to get up one equally as large and good, and you will be surprised to hear these old experienced dairymen tell you how long it has taken, or how long it would take for the average person to accomplish such a great task, requiring both skill and cleverness to be successful. This fact, however, should not deter any from attempting it, for, where circumstances of soil, climate, management are favorable, a farmer of average intelligence, can from year to year, add animals to his herd till he has such as he may need. By this means, the expense will not be so great, while the farmer will be constantly adding items of experience and knowledge to his stock of dairy lore, and will be better fitted to buy intelligently.

Before attempting to start a butter dairy farm, two essentials, to success at the onset must be duly regarded. Your land, must be good grass land, or capable of producing good heavy growths of grass, while you must be sufficiently near to market, to prevent it from being an obstacle to your success.—Having settled these two points to your satisfaction, the next thing to consider, is the breed or breeds best suited for the purpose.

While the short horns undoubtedly are far superior as beef cattle, they cannot compare as a class, with the Jerseys (sometimes called Alderneys) for butter production. There are some who may wish to combat this, but we have carefully studied this, and know whereof we affirm. A friend of ours in Chester County, Pa., who is wealthy as well as enterprising, determined to give this matter a thoroughly practical test, so he purchased five fine, full blood short horn cows, and gave them a careful test, individually. The result was that *but one* of these short horn cows proved valuable enough

to be retained in his exceptionally, fine herd of some seventy or eighty choice butter dairy animals.

We acknowledge the claims the short horns have as beef producers, for they are well founded ones, but we deny that they are butter dairy animals.—Surely, out of 5 choice Jersey cows, a larger percentage than *one* would be found worthy of favor in the opinion of the dairyman.

In regards to pure blood, we would say, that it is very nice indeed, to have a herd of pure bloods, and generally pays well; but there are but few farmers who rely solely on their farms for support, who have either the cash or the courage to establish a herd of full bloods. As far the returns from the milk produced from the cows is concerned, equally as much, in some few cases *more*—can be realized from half bloods as from full bloods, tho' it is from the full bloods the good qualities come. Such being the case, one of the best investments the farmer can make, is the purchase of a full blood Jersey bull or bull calf, which can now be bought all the way from \$50 to \$150 each. By breeding such bull to your best cows, you have them drop half blood calves. Save the best heifer calves, thus produced and continue doing so until you have obtained the quality you desire in your animals.—The process is slow, no doubt, but the sooner you commence it, the sooner will you gain your object. If one or two full blood heifers or cows be bought at the same time the bull is procured, you can, at the same time, be gradually establishing a herd of full bloods for yourself. Never despise commencing in a small way, for it is the most certain of success, even tho' it takes more time to accomplish it, so do not let this deter you from making the attempt.

In producing a first-class quality of butter, a brand which will sell readily at paying prices, the utmost cleanliness in all departments connected with the business is absolutely necessary, and unless such a course is pursued, the quality of the butter cannot, and will not, be first-class, even if only the best cows are used in the dairy herd.—Some few careless persons overlook this essential to success, and, consequently, fall short, just that far, of accomplishing the desired degree of success.

There are very many items of interest and value connected with the subject of Butter Dairying, that we cannot expect to fully cover the whole grounds, in the narrow confines of a single magazine article, the most we can do now being to call the attention of farmers to the subject, and, from time to time, give items of experience on this important subject.

BREEDERS OF FINE STOCK:—Any person engaged in breeding fine stock of any description, would do well to advertise the same in the *Maryland Farmer*. We are constantly inquired of as to where improved breeds of stock can be had,

COST OF BUTTER.—We give our readers the benefit of the following which we get from one of our exchanges :

The cost of producing a pound of butter varies in different localities, according to the value of land, of stock and of labor. An average quality of milk, when treated properly, and taking the whole season together, has been made to yield at the rate of a pound of butter from 20 to 25 pounds of milk. We should say it would be safe to assume that 25 pounds of milk, as an average, would make one pound of butter. A quart of milk will weigh from 34 to 35 ounces; but say, in round numbers, that the 25 pounds represents 12 quarts of milk, and that this represents one pound of butter. At the butter factories, where milk is delivered by patrons and treated in quantity for butter making, from three to five cents per pound of the product made, is charged by the manufacturer for his labor and the expenses in running the factory. In butter dairies there is great variation in the product yielded per cow—from 100 to 250 pounds of butter during the season; 200 pounds is considered a good yield, and more than the average. Of course, with a good lot of cows yielding 200 pounds of butter and upward per cow for the season, the cost would be less for producing a pound of butter than with the same number of cows yielding only 100 pounds of product per cow;

INFLUENCE OF SIRE ON MILKING QUALITIES OF COWS.—An interesting fact has been well established in the breeding of dairy stock, that the power of transmitting the milking qualities of the breed, which belong more properly speaking to the female, resides with the male, showing that he possesses the germs, so to speak of the qualities belonging to the cow.

It was first proved in the use of the Jersey bull, which transmitted the rich butter making qualities belonging to the breed, but it has often been shown since, and may be regarded as well settled. And it is a practical point of so much importance that it ought to be kept constantly in mind by breeders of dairy stock.

No doubt both animals ought to be good of their kind, but the bull should be derived from a milking stock, or come from a cow remarkable for her excellence as a milker.

A disregard of this rule has often led to unexpected failure, and hence the great importance of knowing something of the origin of the animal we intend to use as a stock getter.

We have known many instances where farmers have gone to great expense of time and labor to raise the calf of some favorite cow without regard to the quality of the bull that sired it, and after all have only disappointment and disgust at the results.

If any farmer has such a cow he should remember that it is equally important to know something of the male from which she is bred.—[Dirigo Rural.

The Poultry House.

Ducks—Setting Eggs and Rearing Young.

If possible, set duck eggs under hens, as they make better mothers and will find food for the ducklings—something a duck will not do. After the hen has set four weeks, the ducklings will appear. Perhaps it will be necessary to help some of them from the shell, as they are not as lively as chickens, and sometimes are unable to get out alone.

A pen should be made with boards eight or ten inches high and five feet square, or large enough to contain the number of ducklings you may have.

The hen should be confined in a coop in one corner of the yard, so as not to wander away.—Keep your brood confined till it is a month old, and do not allow them to follow the hen, for if you do they stray away and one by one your flock will grow numerically smaller. When they are sufficiently large and have their body feathers, less care may be bestowed upon them and they may range for themselves.

As for food, for the first three or four weeks we would recommend a variety. The week directly after they are hatched give them soaked bread, coarse bread being preferable as it is less pasty, potatoes, boiled and mashed, with bran or shorts. As they become older, do away with the former feed and use meal and bran, equal parts, scalded, and occasionally mixed with boiled potatoes, chopped onion tops or lettuce. This has been our bill of fare for our web-footed pets for some years and we have met with great success.

Last, but not least, *beware of water*. You may think this a strange suggestion, but there are more young tame ducks lost on account of water than from any other cause. A shallow dish with water, say two or three inches deep, is enough till they are a month old. If allowed free access to a pond or stream, they will get water-logged and invariably die. And if they escape this, cramp is most sure to attack them, and, after a few days of tumbling and twisting, death relieves them from any more such actions.

We know of no variety easier to rear than the Rouens, and we have a young flock of 15 or 20 that are as sprightly as so many kittens. They all look as near alike as peas and are the admiration of all who see them.—[I. P. Lord, in *Pacific Rural Press*.

IT IS A GOOD PLAN for all who can do so, to use tobacco stems in constructing nests. These stems can be obtained at any tobacco factory for the trouble of going for them. They are a sure preventative of vermin in nests and are particularly useful in the nests of setting hens.

Houdans.

In no other country has the rearing of Poultry been regarded as such a staple industry as in France. Their leading varieties are birds of the races of Crevecœur, Houdan, La Bresse and La Fleche. The Bresse fowls are the most numerous; next come the Houdans, the subject of our present sketch. These birds derive their name from a little village in France, where they were first bred, and they are now held in high estimation throughout that country.

The Houdan is a large, heavy, short-legged fowl, with small, light bone, small percentage of offal, with color rocky-white and black, with irregularly speckled or mottled plumage. They are easily reared and fattened; feather early, and are extremely hardy; constant layers of good-sized white eggs, in large numbers, and remarkable as being almost invariably fertile. As a table fowl, they merit a high position, the quality of their flesh being very fine. In weight they exceed the average Crevecœur, though not as heavy as the Bresse fowls, and they shrink less in dressing and cooking than the latter breed; they are very precocious, chickens only four months old weighing, without the intestines, about four and one-half pounds, and the fowls are rather disinclined to sit.

This fowl has a bulky appearance, its crest is spangled with black and white; comb triple, the outside opening like two leaves of a book, and the center being low and slightly oval; the legs are strong, though not large, of a lead color, usually with five claws, and the two hind ones above the other. In show birds, in England, absence of the fifth claw disqualifies, while in America the requirement is not insisted upon. This breed offers great advantages for cross-breeding, for the table, and much benefit might be derived in using imported stock in connection with large hens of other breeds in this country, towards increasing the size, hardihood, early maturity and fitness for the market of the chickens. The Houdans bear confinement well, are full of spirit and vivacity; the chickens, from the first, are lively, hardy little things, and mature with a marvelous rapidity.

The novelty of their appearance, with the triple comb, towering and spangled crest, proud strut, superb color, and, and general Frenchy appearance, combined with the many good qualities as egg producers and table fowl, make the Houdans worthy the attention and careful breeding of the Poultry farmers of America.—[*American Cultivator*.

The value of the agricultural productions of California last year is estimated at \$70,000,000.

THE
MARYLAND FARMER,
A STANDARD MAGAZINE.

EZRA WHITMAN,
Proprietor.

COL. S. S. MILLS, Conducting Editor.

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BALTIMORE, SEPTEMBER 1, 1877.

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Five copies and more, one dollar each.

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John Carroll Walsh,
John Lee Carroll,
John Feast,
D. Z. Evans, Jr.,
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Dr. J. E. Snodgrass,

Club Subscriptions.

The subscription price of the MARYLAND FARMER, single copy, is \$1.50 per annum.

In clubs, of five or more, \$1.00 each; and names may still be added to the clubs already made up at the same price.

Any one taking the trouble to get up a club of five, and sending us *five dollars*, can have a sixth copy gratis.

Any subscriber who will get a new subscriber can send us the \$1.00 and keep the 50 cents as commission for his trouble.

Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

To POST MASTERS.—You will see that the subscription price of the MARYLAND FARMER is \$1.50 per year; but you will be allowed a commission of 50 cents on each subscriber that you will send us; that is, send us \$1.00 and keep 50 cents on each.

Post Masters are respectfully requested to obtain subscribers and retain the percentage.

SPECIAL NOTICE.

Under the present new arrangement, the Publisher hopes he gives to the readers and patrons of the MARYLAND FARMER, in this number of his Journal, an evidence of increased vigor and progress it has always aimed to attain.

He thinks the present number unexceptional as to its solid, useful matter, and is creditable in its general make-up—he means, in the future, to still further add to its usefulness and high character, let it cost what it may. Having experienced, educated and practical gentlemen connected with the editorial department, and a large number of able and instructive correspondents scattered over the State and the Union, the MARYLAND FARMER must assuredly become a magazine, to every farmer or cultivator of plants, trees, fruits and flowers, in both country and town, full of interest and valuable information and worth, ten times over its small cost per annum, to each subscriber.

But to carry out this honest effort, it is hoped that old subscribers will aid, by promptly paying up subscriptions of long standing, and that others who have been punctual in payment will go further in obliging us by procuring us additional names, so that when the circulation has reached the point—not far off now—when it can be afforded, the MARYLAND FARMER will be furnished at a less price to its patrons, for the publisher does not desire to make it a source of revenue to himself, he only desires that it shall annually pay back to him his outlay for its publication, which is very large. His main object in publishing an Agricultural Journal, is to gratify his desire to see agriculture and horticulture flourish, to which important industries he has been attached all his life, and in one form or another, he has made it the business pursuit for a long number of years.

It is earnestly wished that the farmers will consider this appeal, and remember that it is economy to keep wagon wheels well greased. If they desire the MARYLAND FARMER to run smooth and well let them give it *no soap* but *some silver*.

It should be borne in mind, that the MARYLAND FARMER is the OLDEST Agricultural Journal continuously published by the same owner and publisher, of any now in Maryland or in the entire South.

NOTICE!

Col. D. S. Curtis is authorized to act as Correspondent and Agent for the MARYLAND FARMER, in the District of Columbia and surrounding Counties of Maryland and Virginia.

E. WHITMAN.

On the Wing.

Business and recreation took us to Rockville, Montgomery County, Md., on the eighth of August. It was gratifying to see how of late the country between Baltimore and Washington had improved in general appearance. The farm of Mr. Ober, near Laurel is a notable sample. The fences, buildings, grass lands, and orchards are in nice order; the crops growing are very promising. It all shows the effects of good management, liberal use of fertilizers and a merchant's eye to business, whether on the farm or in the counting house. We did see however what we never could give our assent to; putting manure in small piles to be spread at a distant day. It is an old habit but a bad one.—Few farmers who are scientific enough to know the value of the salts and the ammonia in manure pursue such practice. The Baltimore and Ohio R. R. Co. did the like last spring, on a field near Relay, but put so large a quantity that the loss to the crop of corn is not very perceivable, as the season has been very favorable. The crop is splendid, but in our judgment too closely planted for a heavy yield. It has not been worked enough or we think it would have given 15 barrels per acre.

After passing Silver Spring, the famous home-stand of the famous Blais family in Montgomery, we saw signs of want of rain until we reached Rockville; though the grass in the pastures was green and crops not suffering, but the corn seemed to have been planted very late, and will not yield well unless they have good rains when it tassels and shoots. But all the way, we were delighted to see evidences of the industry, taste, neatness and thrift of the farmers, giving assurance that the farmers are in a prosperous condition. Few counties in the State can boast better agriculture than Montgomery.

We met many old friends and made several new acquaintances, one and all manifesting that cordial hospitality which has ever characterized the old town of Rockville.

We are indebted to our young brother of the Press, *Brewer*, the genial and talented editor of the *Advocate*, for his very kind attentions. Having a leisure moment we walked over the Agricultural Fair Grounds, and found them in good order, with a capital trotting track, third of mile, and several young horses in training. The grounds are a complete grove of fine forest trees, affording shade over the whole ground, yet so high trimmed that the air is not excluded, and though it was a hot day, it was pleasantly cool there. The buildings are arranged well for the comfort of visitors, and

all neat and clean. Numerous cosy seats are found over the high ground which overlooks the entire scene while the show is going on. The fair we learn will commence on the 13th of September, and continue three days, and is expected to be the best they have ever held, which is expecting much, as all the late preceding ones have been very creditable to the county. We hope to be able to be three to see.

THIS YEAR'S WHEAT CROP.—The statistics of the yield of wheat for 1877, are very encouraging. Notwithstanding a deficit in California of 12,000,000 bushels, the excess over last year, west of the Alleghanies is estimated at 80,000,000, valued at \$100,000,000. This is quite a nice amount to rely upon in keeping up the present balance of exchanges in our favor with other countries, and is a solid fact on which to predict "better times" are really coming.

A FINE YIELD OF WHEAT.—Mr. W. J. Gortner, one of our prompt subscribers, in Prince George's County, Md., thrashed 348 bushels of Fultz wheat from 12 bushels sowing, "not counting the rakings." This is 29 bushels for each one sown. Mr. G. is an intelligent and go-a-head Pennsylvania farmer, who lately purchased a farm in the Forest of Prince George's, and has in more ways than in growing wheat, set an example in farming successfully, to the old settlers in that section, well worthy their imitation.

Meetings of State and County Fairs, to be held in Maryland during 1877.

STATE AGRICULTURAL AND MECHANICAL ASSOCIATION will hold its annual meeting, this year, at *Westminster*, Carroll County, Md. But the time we have not yet learned and the Premium list has not yet been completed but both will be announced in due time next month.

Under the auspices and active energies of such gentlemen as *President* Merryman and *Marshal* Maynard; with there able corps of assistant officers, it cannot help from being a great success in every particular.

FREDERICK COUNTY FAIR, will be held in *Fredrick City*, from 10th to 14th, inclusive, of October.

THE MONTGOMERY SOCIETY will hold its next meeting at the Fair Grounds at Rockville, on the 13th of September, 1877. A creditable Exhibition is expected.

THE 17TH ST. LOUIS FAIR AND EXPOSITION, with \$50,000 offered in premiums, will begin on the 10th of September, and closes on the 6th October, 1877. It will well repay all who may visit it, as it is on the grandest scale of any society exhibition in the Union.

THE PIEDMONT AGRICULTURAL SOCIETY will hold its 6th Annual Meeting at *Culpeper*, Virginia, on the 16th, 17th, 18th and 19th of October, 1877.

The Maryland Agricultural College.

There are some people in this world who would rather pull down and destroy than sustain and build up. Some are influenced by envy, not having the capacity to rear a structure, they delight in destroying that which wiser men have erected; others want notoriety as reformers, especially in the present revolutionary times. Other persons are never satisfied to let "well enough" alone. Wise in their own conceits, they think nobody but themselves can do anything properly.

Some individuals who have always been dissatisfied and inimical to the College, except when they were connected with it in some official capacity, lately endeavored to take, in a not very open and frank way, advantage of a foolish clause in one of the Acts of Assembly, relating to the government of the Agricultural College. Seeing that such a procedure was frowned down by the public, they adjourned, and issued a more regular call, though *it* is not strictly in compliance with the charter, which requires the object of the meeting to be stated in the call itself.

That this whole affair may be understood properly, we will give an unvarnished statement of facts.

From the death of the lamented C. B. Calvert, the chief founder of the College, it became crippled in finances, and lost much in character, until under the administration of Rev. Mr. Regester, as President of the Faculty, the affairs of the College culminated to its ruin as an educational institution and to the brink of the gulf of insolvency. This condition was not ameliorated under Gen. Jones' administration, for many reasons, not now necessary to be stated.

The Stockholders met and by a large vote elected a set of Trustees, whose high character gave assurance that great efforts would be made to elevate the College and relieve it of debt. The Trustees called Capt. W. H. Parker to the Presidency, with full power to select the different Professors and do what he thought best to bring the College out of its \$13,000 debt. All his acts however to be subject to approval by the Board.

Capt. Parker, by the exercise of his well established business talent, energy and economy, aided by the advice of the Board, has, within the two years, relieved the College of all debt, and brought its standing back to what it was in its palmiest days.

In April last, the Stockholders held a general meeting in Baltimore, and after discussion and explanations, Capt. Parker and the Board were complimented upon their success and all re-elected, except Mr. Calvert who was the only member of the Board that seemed to be dissatisfied.

The Maryland Agricultural College is in a better condition than it has ever been.

More agriculture—both theoretical and practical—was taught in its last two terms than ever before; while the number of students taking the agricultural course, compares favorably with other colleges in the country. The last catalogue of the University of Minnesota, lies on our table, just received, and although it has a full corps of professors and instructors of agriculture, out of its 304 students in all departments, there are but *two* professedly and actually in the agricultural class.

It has been said that the students were too young.

The average age of the students last year, 81 in number, was 17 years, but as this College had to be built up *from the ground*, it was necessary to take boys of 14 and *identify* them with the College; for it could not be expected young men would leave the junior and senior classes of other Colleges to come here.

It is said the President used the money of State to educate boys for the army and navy. *The fact is, the money of the State has been used to pay off old debts.*

Perhaps, there is not a President of an Agricultural College who is a farmer. There is no more reason why the President should be a farmer or Prof. of Agriculture, than that he should be a Chemist and Prof. of Chemistry, or a Linguist and Prof. of Languages.

The curriculum of this College is almost identical with the *Michigan* and *Virginia* Agricultural Colleges, and there is hardly anything mentioned in Mr. Sands' letter to Gen. Hardcastle that is not taught in our College.

There is not in this country an Agricultural College which refuses to take any but students of agriculture.

The specious plea set up is calculated to deceive all persons who do not take the trouble to look closely into the matter.

The main statement which has done the College most harm, is that no Agriculture is taught, and that it is nothing more than a preparatory school for the Naval Academy and West Point. This we *know to be without foundation in truth*. The nearest approach to preparation of boys for these institutions is the study of the higher branches of mathematics by such boys as are sufficiently advanced, and by *all*, whether intended for army and navy, the professions, or to become enlightened farmers.

We should have more fully ventilated this subject, but we deem it unnecessary after the able and candid address of Judge Tuck to the Stockholders which we publish, and for which we ask a candid perusal by our readers.

In face of all that now appears, we feel confident that the stockholders will suffer no such indignity to be offered the Faculty and Trustees, so lately elected, and their course approved by a large majority of the stock, as to turn them out before they have perfected *their original plan*, in accordance with the sensible resolution offered by Mr. McHenry and adopted in general meeting, and warmly concurred in by the Board.

It is desirable that all stockholders who wish to see the College *keep free from debt*, and go on *gradually* improving, and who desire to sustain the present policy, should send their proxies to any of the following gentlemen of the Board before the meeting on the 11th of September: Col. JAS. T. EARLE, Centreville; Gen. HARDCASTLE, Easton; Major JOHN F. LEE, Upper Marlborough; Judge TUCK, Annapolis; EZRA WHITMAN, Baltimore; ALLEN DODGE, Georgetown.

For the Maryland Farmer.

ZEA MAIZE—INDIAN CORN.

"Day by day did Hiawatha,
Go to wait and watch beside it,
Kept the dark mould soft above it,
Kept it clean from weeds, and insects,
Drove away, with scoffs and shoutings,
Kahgahgee, the king of ravens,
Till at length a small green feather
From the earth shot slowly upward,
Then another, and another,
And before the summer ended,
Stood the maize in all its beauty,
With its shining robes about it,
And its long, soft yellow tresses;
And in rapture Hiawatha
Cried aloud, it is 'Mondamin!'
Yes, the friend of man, Mondamin!"

Maize, or Indian Corn, is of American origin, and was discovered by the earliest explorers, as a plant cultivated for bread, by the aborigines, upon the Island of Cuba, at the time of its discovery by Columbus, and in many other places in America when first explored by Europeans. "Although much has been said about the Eastern origin of this plant it has never been found in any ancient Sarcophagus, or Pyramid, nor represented in any ancient painting, sculpture, or works of art, except in America. According to the earliest Peruvian historians, the Palace Gardens of the Incas were ornamented with maize, in gold and silver, with all the grains, spikes, stalks, and leaves, in its exact and natural size, a proof no less, of the wealth of the Incas, than that of these veneration of important grain."

"The early history of our bread plants has only descended to us in the form of tradition and myths." According to them, the God's themselves, descended

to the earth, to confer this great gift upon mankind." "In India was Brama, in Egypt Isis, in Greece Demeter, in Italy Ceres, who gave corn to the native and taught them to cultivate it."

The Ancient Perurians, and North American Indians had similar traditions concerning maize, in which this idea was symbolized under the form of a special gift from the Great Spirit! It is well known that corn planting and corn gathering, was left almost entirely to the woman of the tribes, and this labor was not compulsory, but was assured by the women, as a just equivalent in their view for the continuous labors of the men in providing meat, and skins for their clothing, and defending them from their enemies. A good Indian squad deems it her prerogative, and prides herself on having a large store of maize to exercise her hospitality in the entertainment of the guests of the Lodge."

A well developed stalk of corn is a beautiful object, and were it not so common would be highly prized, as an ornamental plant. "What one gift of nature to the American farmer can compare with Indian corns. It is the universal grain of our country, growing equally well in the narrow valleys of New England, and on the sunny plains of the South, on the eastern slopes of the Alleghanies, and on the shores of the Pacific." "From its flexibility, it may be acclimated by gradual cultivation from Canada to Mexico, and from Oregon to Patagonia." It is effected in a remarkable degree by climate, and soil, and often a new variety is the result.—There is a miniature kind called Bragillion, has ears about the size of one's little finger, and grains not larger than mustard seed, while some varieties have kernels nearly an inch long. The grains presents every variety of colors from white, to various shades of yellow, orange, red, purple, brown, and black. It is the most useful of all farm crops and one of the most beautiful in every stage of its growth, no other grain is so extensively used for the sustenance of the human race except *rice*; yet Indian corn is not the staple of any country outside America, but it is gradually taking the place of other grains in use for which it is equally adapted.

"Corn is the first food of society, because its cultivation, and preparation for our use, requires great labor, and reciprocal services. It seems to have been confided by Providence to the care of man, to secure to him, the sceptre of earth, and assure him, of the unfailing care and goodness of Creation's Lord."

WICOMICO.

A Missouri paper, speaking of the cold winter of 1827, said: "Hogs and cattle and turkeys roosting on the trees were frozen to death,"

JUDGE TUCK'S ADDRESS.

TO THE STOCKHOLDERS OF THE MARYLAND AGRICULTURAL COLLEGE.

I intended not to notice the open letter of Mr. Wm. B. Sands, published in the July number of the *American Farmer*,—unjust as I knew it to be to the other trustees of the college, who attended the meeting, held on the 6th June—so long as he confined himself to an appeal, from their action, to the public, for whom his letter was intended.—But when he followed up his purpose to re-organize the college, by joining in a call for a meeting of the stockholders, in violation of law as I think, for the purpose of carrying his complaint before them, and to obtain if possible the removal of *his* associates in the board, because they did not adopt his plan for the government of the institution, I thought that justice, to myself at least, required a notice of his imperfect statement of what occurred at that meeting. This I could not do before the meeting, which took place on the 9th instant, as I had not seen the notice at all, and the movement was so quietly conducted that I was not informed of it until the 7th.

The call having been renewed for the 11th Sept. I take this opportunity to address those to whom I recognize my accountability as one of their trustees. My sole object is to put them in possession, more fully of the proceedings of the meeting, which Mr. Sands has deemed a proper occasion for his movement, and also to suggest some considerations in vindication of the other trustees then present. Those who know me will not suppose, that I desire to propitiate the stockholders, in view of the election proposed to be held on the 11 *proximo*, for while I am willing to serve to the extent of my capacity in the position I hold, I shall never forfeit my self respect, or degrade the office by running after it, and believing as I do, that these contests about its management are calculated to do more harm than good to the institution, and being unwilling to share the responsibility for consequences, I do not desire to be a candidate at the next election, sincerely hoping that my place may be filled by some one better qualified for the duties of trustee.

At the June meeting there were present Messrs. James T. Earle, John F. Lee, Ezra Whitman, Allen Dodge, Wm. B. Sands, and myself; those absent were the Governor, the President of the Senate the Speaker of the House of Delegates, the Principal of the State Normal School—representatives, of the State—and Genl. Hardcastle, a private director. During the proceedings President Parker read

his report, and those of the professors were also read, in the presence of Mr. Sands, and the rest of us; we had some conversational discussion and explanations of the president's plans for the next year, in which, as I think, Mr. Sands took no part. Presently, he read his resolutions and was about to discuss them, when one of the members—I can't recall who—said they had not been seconded, to which I remarked that we were not governed by strict parliamentary rules, that when resolutions are read, they are before the body for consideration, and need not be seconded. My object was to remove all impediment in the way of discussion, in order that Mr. S. might be fully heard, because, as he appeared to have considered the subject I wanted to hear his explanation of the plan. At this point, Col. Earle relieved us of all question on the point of order, by saying that the chair would consider the resolutions as having been seconded, and that Mr. S. might proceed. No one objected, and if there had been objection made I should have seconded them myself. He explained his plan fully, and very much after the manner of his open letter, without any interruption, or manifestation of impatience, that I saw; there was no reason for haste, and there was none. When he concluded, remarks were made by Col. Earle, and others.

Mr. Sands says "another member, after a complimentary expression, inspired perhaps by a disposition to complaisance towards so new a member of the board, indicated his belief that they would violate express conditions of the charter." In this I believe he referred to myself; if so he was under a mistake. I said nothing out of complaisance. What I said I meant. I did not merely indicate, a belief on the legal proposition. If he meant by that, to intimate that I manifested any doubt on the question he erred again, for I read from the Acts of Assembly, and stated unequivocally, my decided opinion that they contained requirements which the resolutions, practically ignored, and that objection was fatal to his plan as an entirety. By the Charter 1856, Chap. 97, Agriculture is required to be taught, "in addition to the usual course of scholastic learning." and by the Act of 1865, Chap. 178, it is to be taught, "without excluding other scientific and classical studies, and including military tactics." These provisions to my mind were imperative, and admitted of no discretion in the College authorities.

I added, however that I was unwilling to take final action at that time, that we had just heard the reports of the President and Professors, which seemed to cover all that was necessary, but from that reading I could not determine how far the resolution of Mr. McHenry, would be carried into effect if

the president's plan was adhered to, and that, as some of the views contained in the resolutions, as explained by Mr. S. as far as I could then understand them met my approval, I would prefer that they be laid on the table for the purpose of considering them at a subsequent meeting, and incorporating such of them as should be found expedient or necessary in the management of the college. Of course I repudiated *in toto* his resolution asking the resignation of the Faculty, as altogether inexpedient and revolutionary. After further discussion I made that motion, to which I heard no objections, though I presume Mr. Sands, who desired the immediate adoption of his plan, mentally dissented if he did not express it.

How Mr. S. could say in his letter that his resolutions were "promptly tabled" (meaning, as I suppose, to convey the idea that they were utterly and finally rejected without due consideration) passes my comprehension, in view of the facts I have stated, and his own statement, that he "took issue with every point" of opposition, which implies that the amplest time for discussion was enjoyed by himself, and others, as was really the fact, and I now say that it is competent for Mr. Sands at any meeting of the board to call them up for consideration, as was contemplated by my motion; and I may also add that it was my purpose to have done so, if Mr. Sands had not by his course taken the subject from the consideration of the board, and remitted it to the judgment of the stockholders.

I maintain that the board made the only disposition of the resolutions, that under the circumstances they could have properly made, or that Mr. Sands himself, as a reasonable man, ought to have expected, or desired in the interests of the college.

Mr. S. had prepared his resolutions at home before he knew what recommendations the President would make, or what might be proposed in the board, to give effect to the resolution of Mr. McHenry. He offered them as a plan for revolutionizing the institution under the idea that nothing else could, by any possibility, succeed. He did not submit them for consideration, in connection with the reports of the principal and professors, after the whole should have been printed, and we could better understand what we were dealing with. He did not, as I now think, intend to submit his plan to the judgment of the board, even for amendment, except for "some modifications to which he would have *consented* to secure the principal end in view" (his letter p. 246). "His plan was,—*perhaps* with some modification—the *only* one to secure permanent prosperity"—p. 253—With him it seemed to be, that or nothing. It does not appear ever to have entered his mind that the trustees, in

full meeting and after mature consideration, might agree to disagree as to some points and as to others work harmoniously and in good faith with each other, in zealous and well directed efforts to make the college what its founders intended, and what its friends now desire. But he wished his plan adopted then, by a board in which the State, owning half the property, and for which she had paid forty-five thousand dollars, was not represented, and when any one might foresee, that, having just cause, she would complain if such radical changes were made in the absence of those specially charged with the protection of her interests.

It was our misfortune to remember that the state had rights that ought to be respected, and that being a mere quorum we ought not to act hastily or inconsiderately with those rights. Mr. Sands' idea was, that no time should be lost, that the chairs of all the professors should at once be vacated, and a day in July appointed for making other appointments, reducing their number and the sphere of instruction in order that the new organization might be completed in time for the September Term. For myself I was not prepared to deal in that manner with property and rights, in which those I represented had only a partial interest, when the State on whose bounty we must rely for indispensable aid, owned the other share, and was not represented. It was unreasonable to expect persons with any sense of responsibility to take such advantage, and I am much mistaken in my estimate of the stockholders if they dissent from this view, whatever opinions they may entertain as to other points of this controversy among themselves.

I had learned from the papers and other sources, whether correctly or not I cannot say, that the stockholders, at the April meeting, had, by a large majority, approved the management of the College, by re-electing the old Board, with the exception of the only member who was not in sympathy with his fellow members, and who acted with those who were aiming at the choice of new trustees, with a view to reorganize the institution, and that Mr. Sands was elected in his place, because he was said to be in harmony with the majority as to the management of the College; the stockholders at the same time accompanying that manifestation of confidence by the passage of a resolution declaring that "instruction in practical and experimental agriculture should be made the leading feature in the educational system, at the earliest possible moment." There was no suggestion or hint, as far as I ever heard, that the stockholders desired an entire reorganization, or a change of the faculty, or a new departure in the course of studies, except that agriculture should be made the prominent feature.

On the contrary, as I was told, there had been manifestations of confidence in the administration, even by some of those who I am informed are now seeking to effect a change, with the understanding that the board and faculty should proceed as before, carrying out, at the same time, the requirements of Mr. McHenry's resolution in good faith. Mr. Sands is one of the gentlemen to whom such confidence had been ascribed, by his voting with the majority in re-electing the present board, with the exception of Mr. Calvert. Mr. Parker, in his report, refers to him, gratefully in that connection, which he heard and did not then disclaim, or correct. In the light of this information, which I had no reason to doubt, I confess to some amazement when I found, that Mr. Sands, who had replaced Mr. Calvert, was so much less in accord with the board as to recommend an entire re-organization of the institution. Here was another reason for delay and against immediate action, for it was important to ascertain whether the stockholders who had re-elected us had changed their views of the management, or whether Mr. Sands only had changed his, since his election, assuming as I do that we had been correctly informed as to what his opinions were at that time. From all the information I had received I thought Mr. Sands, in his plan, was not reflecting the designs of the majority of stockholders, and that it was our duty to continue the management, always observing and giving effect to Mr. McHenry's resolution, in its most comprehensive meaning, instead of hastily adopting other views from any quarter.

That the stockholders did not intend the radical change proposed by Mr. Sands, the resolution itself shows, by the clearest implication. It does not, by any interpretation, contemplate an entire re-organization, presently or in the future. Its requirements were to be gratified not immediately, or when any one trustee might demand it, but "at the earliest possible time," of which, of course, the board was to be the judge in the exercise of a fair and honest discretion, as to time and method. Agriculture was to be the *leading*, not the *exclusive* feature. Mr. McHenry, who ought to be accepted as the best exponent of his own language and intention, in his letter to Mr. Sands, published in the American Farmer, for August, says, that the trustees were expected to "*gradually*" inaugurate the desired reform and expresses his "unwillingness to assume hastily that they will totally disregard the expressed wishes of the stockholders," and the letter also clearly shows that his resolution was to be carried into effect *by the present board* after the commencement of the coming term, and I agree with him that if large practical results in

the agricultural department are not shown, after a reasonable time, the management ought to pass into other hands.

There was another reason personal to myself. I had been a trustee for only something more than a year. I found in the board, gentlemen, most of whom I had known well for years, and who had been identified with the College from its foundation. They were farmers and planters of rare intelligence and skill in their calling, and of ripe judgment and clear forethought, as to what were the needs of the very important class of citizens of which they are honorable and honored members. They had watched over this institution in all its phases of fortune. In good report and evil report, they had stood its fast friends, and felt as deep interest in its success as any other stockholders. Acting with such a body, I hope that Mr. Sands will not take it amiss when I say, that, stranger as he was to me personally and not having heard of him as possessing better opportunities, than these gentlemen, of knowing the wants of the College and the best means of supplying them, I felt more inclined to be guided by their counsel than to follow his plan, however perfect in his own estimation. I was willing, however, in all frankness, to have conferred with him, to have given his views formed after much reading and reflection I am sure, all the consideration and support to which I might have thought them entitled after understanding and reflecting upon them myself, and I pursued the only course open to me and the other trustees to do him and his plan that justice. It is not the fault of the trustees if that opportunity has been denied to them.

I do not propose to criticise Mr. Sand's plan in comparison with the programme set forth in the College Register. By his plan, I mean the resolutions on which we were to vote, and not the views elaborated in his letter. I have carefully examined the resolutions, and do not find that they contain anything on the subject of Agriculture and kindred branches, that is not provided for in the Register, except, perhaps a few details which can be easily introduced by a vote of the board at any time, and the reports of the professors show, that most of what his plan suggests, has already been taught. I do not here allude to the seventh, which requires a strict adherence to the course laid down, and prohibits the reception of students in special branches. On these questions, I think, there is much to be said on both sides, and that their solution may be left to time and experience, though I incline to the opinion that all students ought to be required to take the full course in Agriculture, whatever other branches

they might take or reject. As to the eighth, relating to daily labor in the fields, I think that the provision in the Register for such labor in the experimental grounds is all that need be required, and, indeed, all that parents will allow, for my opinion is, that few will be willing for their sons to labor in the fields, as proposed by Mr. Sands. I don't think that is the kind of instruction they will be willing to pay for, and their sons will not enjoy in that branch of their education, the pleasures which all instruction ought to afford to the pupil. There will be many rebellious spirits, and many idle hands in that department of practical Agriculture.

To the ninth, which proposes to reduce military instruction to such a minimum, as will gratify the letter of the law, I object, because I think it would be a fraud on the law. If it is to be taught, be honest about it, and let the spirit of the law be carried out. If there is too much appearance of a military school, some of the details may be omitted; that, I think, had better be left to the Board and the President, but I do not mean to intimate that any great changes ought to be made. I would rather retain all than abolish too much. I may here mention that Mr. Sands was on the committee on the Annual Catalogue, which "performed its duty in a *formal* manner." He might have made the duty less formal, and as stringent as need be. Whose fault was that? But he ought not have omitted to state that that committee, not on *his* motion, directed that the word "cadet" should be omitted and "student" inserted wherever it appeared in the former Register, and, that being done, he need not have laid so much stress on this objection, in stating the present condition of the College. All the resolutions looking to changes in the faculty, re-organization, &c., I was opposed to. I have said that on the reading of the resolutions, I thought that some parts of the plan might be utilized, but on examining the Register I found nearly everything embraced that Mr. Sands' plan and his letter contemplated, and I believe now, that any unprejudiced man, qualified for the position of president, can carry out his plan, and the suggestions of the letter, as to agriculture, by following the College Register: the difference is more in arrangement than anything else.

I fear that Mr. Sands in his eagerness to expose the defects and needs of the College, has lost sight of his duty to Gen. Harcastle, and to the public he sought to reach through him—not to mention his higher duty to the College—in not adding something more when speaking of "its present condition." No one, not otherwise informed, can read what is said under that heading, without

reaching the conclusion that the College is a military school, where little if anything else is taught. "Its present condition" is told in less than one column, and not a word said about Astronomy, Architecture, Drawing, Physics, Applied Mathematics, English Literature, Mental Science, History, Ancient and Modern Languages or Natural History, all of which Mr. Sands knew from the Register before him, had been and were to be taught, as required by the charter. To be sure he did not omit special mention of Chemistry, Civil Engineering and Practical Agriculture, but only, as is apparent, to bring the management into disfavor, by exposing how little was done in those departments. Would it not have been just to the Board, and to the faculty, to have informed the public, that while only a few pupils were instructed in the last three branches, fifty, more or less, were receiving instruction in other departments, two of which—Mathematics and English—he had indicated as indispensable parts of his own plan; and all of them recognized, by most of the friends of the College, as necessary to accomplish the broad scheme and scope of its founders? This omission was unjust to the Institution, because his letter may be read in places where a correction may never reach. It was unjust, and equally ungenerous to the Trustees and faculty, because, if nothing had been taught, except what he mentioned, they had grossly violated their duty, and shown themselves to be incompetent, or unfaithful servants. It is difficult to account for this, except that Mr. Sands saw different objects through different mediums, for his vision appears to have been quite sharp to discover defects, while anything worthy of commendation was so far in the "background" as scarcely to be visible at all. Other instances of this kind could be mentioned were it important. I doubt not, that wrong impressions have thus been made among the friends of the College, and, perhaps, on the minds of those whose commendations of his course are published in the August number of his journal. If the College Register and his letter—the antidote and the bane—had gone out together, no mischief could have resulted; and I most sincerely wish that those who may read this, could have before them, at the same time, these publications.

I accept cheerfully Mr. Sands' disclaimer of any "design to impeach in the slightest, the motives of the members of the board," but while I accord to him the same honesty of purpose that I claim for myself, I fail to recognize in his letter that ingenuous spirit which should characterize a discussion of important interests, as to which, one undertakes to enlighten those on whose countenance and support, he may be relying for aid in accomplishing a purpose.

I do not perceive that any good is to result from the proposed radical change. Its friends are sanguine, but that very feeling not unfrequently prevents the accomplishment of the best laid plans. *Festina lente* is a sound maxim, as applicable to the matter now in hand, as when it was first pronounced. The board and faculty are pledged to carry out the resolution of Mr. McHenry, and, I think, that can be most certainly done by cultivating a spirit of harmony and co-operation and by observing this old maxim, and gradually bringing the institution up to the expectations of its founders, under the present President, who has shown so much ability in rescuing it from embarrassments that had well nigh overwhelmed it when he took the helm of administration. As to myself, I lay no claim to merit for what I have done. I never sought the position of trustee; I was requested to serve before appointed. For the short time I have been honored by your confidence, I have endeavored to perform my duties according to the lights before me, and shall retire with that consciousness, trusting that when the present agitation shall have ceased, all engaged in it may enjoy the consolation of having been actuated by no personal or selfish aims; of having had no friendships to serve, no resentments to gratify, no griefs or disappointments to assuage; of having acted in all things, with an eye single to the advancement of an institution in whose prosperity all should rejoice.

WILL. H. TUCK.

Aug. 22d, 1877.

IRRIGATION.—Experiments have been made on a sandy plain outside the city, with oats raised on a soil watered by sewerage from the capital, and on soil not so watered. The irrigation doubled as compared with the oats unirrigated, the height of the straw, quadrupled the number of grains, while augmenting by one-third the weight of each grain. The able chemist and experimentalist, M. Grandaau, has been investigating the nutritive value of oats grown in France, Germany, Hungary, Ireland, etc.; he establishes that the Irish black oats were the most nutritive; that there is no connection between the nutritive value of the grain and its weight per bushel; thus while 22 gallons of Irish oats weighed 16 pounds less than the same quantity from Paitou, yet they were richer for feeding purposes; hence, a "feed" by measure can be not only defective but uneconomical.—*Paris Correspondent Western Rural*.

"Why should we celebrate Washington's birthday more than mine?" asked a teacher. "Because he never told a lie," shouted a little boy

Death to the Tobacco Fly.

In the Clarksville, Tennessee, "*Tobacco Leaf*," we find the following which if sure and reliable is a most valuable and important discovery for the planters of the weed:—

We are indebted to Mr. W. D. Meriwether of the Clarksville Plow Factory for this valuable receipt. Mr. Meriwether however got it from Mr. Robert Wilford, one of the most reliable farmers in Trigg county, Ky., and who is the real discoverer. The receipt for destroying the little bugs which played havoc with tobacco plants last Spring is simply one-sixteenth of an ounce of strychnine dissolved in two buckets of water and sprinkled over the young plants. Mr. Wilford in relating his experiment, said the bug had totally destroyed all of his beds but one, a late bed of thirty square yards, and discovering that they were attacking this one in very strong force, he determined on trying this experiment as he had no other hope of saving a plant, and consequently went to Cadiz and bought a half-dollar bottle of strychnine (one-eighth of an ounce). On returning, he found the bed literally covered with the fly, and proceeded to use the remedy as above described—using only half of the vial,—saving the other half for a second application, which he never made, for the one destroyed the last fly. This bed was troubled no more, and from it he planted seventeen and a half acres of tobacco, making a good crop.

Mr. Wilford further stated that the application did not in the least injure the young plants, but rather seemed to advance the growth; also that he marked a spot in the bed and thoroughly drenched it, to ascertain if a large quantity of the solution was more likely to kill the plants, and it made no difference. Mr. Wilford certainly deserves the thanks of every planter for this valuable discovery. If he will bring his tobacco here, we know our buyers will reward him with a big price for giving out the information, for they don't want to hear any more of the "fly."

We think the experiment worth a trial by every planter, should the bug appear again. Perhaps the same remedy would be good for potato bugs, and other insects that prey upon garden vegetables.

A DELICIOUS APPLE CUSTARD.—Six acid apples of medium size, a tumblerful of crushed sugar, three three table-spoonfuls of very rich, thick cream, six eggs, one lemon peel grated, half the juice; peel the apples and grate them, cream the butter and sugar together, beat the eggs separately and mix as for cake. Bake in puff paste. This quantity will make two custards.

Sixteenth Annual Session of the American Pomological Society.

The American Pomological Society having accepted the invitation of the Maryland Horticultural Society, the undersigned give notice that the Sixteenth Session of this National Association will be held in Baltimore, commencing *Wednesday, September Twelfth*, 1877, at 10 o'clock, A. M., and continuing for three days.

All Horticultural, Pomological, Agricultural, and other kindred Associations in the United States and British Provinces, are invited to send delegations as large as they may deem expedient; and persons interested in the cultivation of fruits are invited to be present, and take seats in the Convention.

It is confidently anticipated that there will be a full attendance of delegates from all quarters of our country, thereby stimulating more extensive cultivation by the concentrated information and experience of cultivators, and aiding the Society in perfecting its Catalogue of Fruits. This Catalogue includes fifty States and Territories, most of which have their columns filled with a great amount of information as to the fruit adapted for culture in the respective locations. Many of these are yet incomplete; and it is the object of the Society, from year to year, to fill the blanks, and bring its Catalogue nearer to perfection. To accomplish this object as fully as possible, the Chairman of the General Fruit Committee, P. BARRY, Esq., Rochester, N. Y., will send out the usual circulars of inquiry; and it is desirable that these inquiries should be answered at an early day. The various State and Local Committees are urged to respond to the circulars as soon as practicable.

The coming session will derive a special interest from its location in the midst of the great fruit-growing region of the Atlantic coast, and also from the fact that it is the first meeting held since the expiration of the first century of our national history. It is desired, in this connection, that the Vice-Presidents of the several States, Territories, and Provinces, should furnish or procure, as far as possible, short historical sketches of the rise and progress of fruit-culture in their respective districts, from their settlement up to the year 1876, to the end that the forthcoming report may give a complete view of the pomological history of the various parts of the country. State and local Horticultural Societies are respectfully requested to cooperate and aid in this work.

Members, delegates, and societies are requested to contribute collections of the fruits of their respective districts, and to communicate in regard to

them whatever may aid in promoting the objects of the Society and the science of American Pomology. Each contributor is requested to prepare a complete list of his collection, and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as early as practicable.

MARSHALL P. WILDER, *Pres't*, Boston, Mass.

W. C. FLAGG, *Secretary*, Moro, Ill.

MARYLAND STATE HORTICULTURAL SOCIETY will hold its Annual Meeting at the same time as the *American Pomological Society*, though opening on the day before,—the 11th inst. Both Societies will be united in one Exhibition, in the 5th Regiment Armory, to which a very large wooden addition has been added, 150 feet in length, 40 feet broad and 30 in height, so as to make it in fact one immense Exhibition room. The State Exhibition is intended to be a Grand one of the Fruits, Flowers, Plants and all other products of the Horticulture of the State, and contributions of the best articles of these products are earnestly desired to be sent, that the Floriculture and Arboriculture, Pomology and Garden products, may be fully illustrated to the thousands of visitors from other States.

The combination of these two Societies, State and National, must attract great attention, and an Exhibition is looked to, worthy of this great Nation. The agricultural and horticultural display at the great Centennial Exhibition, at any one time, will be here excelled.

The indications at present are, that the State Horticultural Society will be very creditable to the florists, fruit-growers and vegetable producers of the State. The civil authorities of the City of Baltimore and its entire population, we may say are manifesting laudable zeal in this unusual Exhibition.

It is the first time that the "American Pomological Society" has ever held a meeting in Baltimore, though it has honored other large cities in the country, by holding meetings in their precincts.

In addition to what the vision and other natural senses may delight in, there will be treats for the intellect. Prof. J. Beale of the Agricultural College, Lansing, Mich., will read a paper on the "Classification of Apples;" Prof. A. N. Prentiss, of Cornell University, will read a paper on "The Pathology of Cultivated Plants," and it is expected that other gentlemen of experience and skill will present papers practical or historical subjects connected with fruit culture.

Persons from all parts of our widely extended Union will be present, bringing specimens of fruits, flowers, trees, plants and vegetable products, from

their several respective localities, is one great inducement to persons to attend this meeting.

It will be well worth a journey of a few hundred miles and the loss of time, with other inconvenient draw-backs, to see and hear the handsome "old man eloquent"—MARSHALL PINCKNEY WILDER—the Patriarch of Pomology and Floriculture—President, and for years past, of this great Association.

Having been, (without arrogating to ourself what is not justly due) chiefly instrumental in originating and fully organizing the Maryland State Horticultural Society, we may be pardoned for exhibiting a warm interest in the forthcoming united exhibition of the State and Nation. We do therefore earnestly entreat every gentleman and lady, especially of Maryland to make an effort to visit these exhibitions and bring with them their children, as they will not perhaps for years to come have such an opportunity offered to see in one collection, so many choice specimens of horticultural production, from every part of our immense country. The period of the year is just the time when the farmer has some leisure, and the opening of the fall market for ladies to select their Autumn and Winter supplies of dry goods.

The weather is usually pleasant, and no better time can be selected for a trip of pleasure to the Monumental City. We are sure that any person who may attend will be interested, and instructed far beyond their expectations, and even wishes.—We do trust our readers will consider this matter, and be certain to put in a personal appearance at this great Union Exhibition on the 11th, 12th, 13th, and 14th of this month.

HARD TIMES.—The carpenters say they don't get enough to pay for their *board*. The shoemaker that it takes their *all* to keep them at work, and their *sole* dependence is on their *last* job. Tailors have determined to give their customers *fits*. The hatters have kept a *head*. The gasfitters go in for *light* work. Bakers say they *need* more, and don't like to see so many *loaf*-ers. Butchers have to work at *killing* prices. The business of the paper-makers brings them to *rags*, while that of the printer is *quoin*-less.

TOMATO MARMALADE.—To each pound of the tomatoes add one pound of white or brown sugar, first scalding, peeling and slicing the red tomatoes. Put over a slow fire and boil down until it is well thickened; add one tablespoonful of powdered ginger and the juice and grated peel of two lemons to every three pounds of tomatoes. Boil from one to three hours, skimming off all froth. When very thick turn into small jars and cover tightly.

NATIONAL AGRICULTURAL CONGRESS.

The Sixth Annual Session of the *National Agricultural Congress*, will be held at the *Grand Pacific Hotel*, in the city of *Chicago*, on Tuesday, Wednesday and Thursday, September **25th, 26th and 27th, 1877**, commencing at 10 A. M. on Tuesday.

All Agricultural Societies, Boards of Agriculture, Agricultural Departments, Agricultural Colleges, Agricultural Periodicals, Granges, Farmers' Clubs, and other organizations whose object is the promotion of Agriculture, in the United States and in British America, are requested to send delegates; and all persons desiring to promote the objects of the Congress are cordially invited to attend and to participate in its deliberations. It is suggested and requested that in each State an effort be made to send at least one delegate from each of its Congressional districts.

Specimens of Agricultural Products—such as the Small Grains, Corn in the Ear, Fruits, Nuts, Seeds, Grasses and other Forage Plants, Tobacco, Hops, Cotton, Hemp, Flax, Sugar, Wool, Dairy Products, etc., are solicited for exhibition and for the comparison of the similar products of different parts of the country.

The Chicago Inter-State Exposition will be open during the meeting of the Congress, and delegates will have the advantage of such reductions of fare as may be extended to other visitors, and an opportunity of visiting the finest exhibition of the agricultural, mineral and manufactured products of the Northwest.

OFFICERS OF THE CONGRESS:

President.

WILLARD C. FLAGG, Moro, Illinois.

Vice-Presidents.

One for each State and Territory.

Secretary.

HORACE J. SMITH, Philadelphia, Pa.

Treasurer.

EZRA WHITMAN, Baltimore, Md.
Publisher of "Maryland Farmer."

Executive Committee.

W. C. FLAGG, HORACE J. SMITH,
EZRA WHITMAN.

We call attention to the above announcement of the forthcoming annual meeting of the National Agricultural Congress, as it is really the most important assemblage for the advancement of agriculture in all its branches, practically, socially and politically, of any association ever formed. It originated in 1870, under the "auspices of the Cotton States Agricultural and Mechanical Associa-

tion, the Augusta Board of Trade, and the Municipal Government of Augusta." Delegates from 11 States and District of Columbia, with the accustomed liberality of views and the warm hearted fraternity of Southerners, convened at Augusta, Georgia, and organized "The Agricultural Congress," whose objects were declared to be "the advancement of Agriculture and the Arts of Husbandry."

The Tennessee Agricultural and Mechanical Association, had a large gathering, held at Nashville, October 3-5th, 1871, composed of delegates from 11 States, representing over 40 Agricultural Societies. This body organized the "National Agricultural Association." The preamble recites as reasons for organizing "To extend the usefulness of the various associations and societies, organized for the purpose of promoting the interests of agriculture in the United States, and in order to create unity and harmony, as well as concert of action, in reference to those measures calculated to increase the efficiency of this, the most important of our national pursuits; and especially secure the proper consideration of questions, pertaining to the industrial and commercial interests, of this large and productive class of our people."

Northern and Western Associations and distinguished agriculturists of all parts of the country, seeing the immense importance of such an organization, heartily joined in the plan and meeting in council at St. Louis in 1872, with one common view and in full fraternization, formed the present National Agricultural Congress to meet thereafter annually. Since then each meeting has much increased in numbers and their labors have correspondingly increased in the development of the great wants of agriculture as well as in the free interchange of ideas and views as to what remedies may be had and applied to the amelioration of those wants, and to the general advancement of the prosperity of the interest in which they are specially concerned, and on which the whole country depends for support of life, and the nation rests its safety for power and defence. A more important national institution, composed of private individuals, does not exist in this country. It embraces in its membership, farmers, scientists, journalists, statesmen, and men distinguished in all the useful employments of life, and each one is imbued with not only a devotion to agriculture, but a conviction of its paramount superiority over all other pursuits in its solid value as an absolute necessity for the sustenance of the human race.

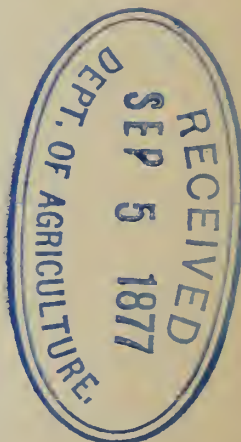
At these meetings, besides the excellent reports of committees on various subjects, essays are read and addresses delivered by some of the ablest

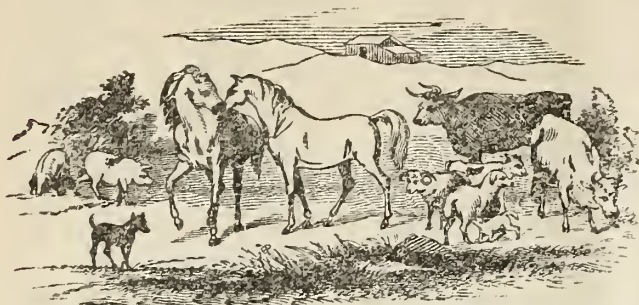
writers, soundest thinkers and most eloquent men in the land. At the coming meeting the programme is a rich one. Addresses by *John P. Reynolds*, Ex-President of the Congress, and by the President, *W. C. Flagg, Esq.*; Prof. *C. V. Riley*, on "Rocky Mountain Locust and the Army Worm." Dr. *J. M. Gregory*, on "The Distribution of Wealth." Prof. *Levi Stockbridge*, on "The Principles of Fertilization." Dr. *J. T. Tichenor*, "Industrial Education in the Gulf States." Hon. *J. Sterling Morton*, "The Rail Roads and their Relation to the Public." *George A. Martin, Esq.*, "Commercial Movements of Produce." Col. *Edward Daniels*, "The Effect of our present Monetary System upon the Agricultural Class." *G. Spague, Esq.*, "Our Agricultural Newspapers." *J. R. Dodge*, of the Agricultural Department, on "A Department of Industry." General discussions each day, and Reports of Standing and Special Committees. All these valuable contributions to the growth of agricultural knowledge and literature, will be the productions of very eminent men. What an intellectual feast for every one who is interested in agriculture and its kindred subjects?

Every person connected with the various Associations and pursuits to which the cordial invitation is extended in the above call, should see that their Society, College, Publication, &c. is well represented, and every farmer or other persons at all connected with agriculture, should endeavor to be present on the occasion. The expense will be comparatively small, the trip a very delightful one, and the information gained in a pleasant and agreeable way, will well compensate for a few days recreation from business, and be both time and money well and remuneratively expended in any phase of the case. We therefore earnestly urge all who can possibly do so, to embrace this opportunity for cheap travel to the great city of the great West, for health, for mental improvement and general benefit of every sort.

FEEDING CHICKS WITH LARGE CORN.—Corn differs very much in size and shape; some is very round and plump, some large and flat; and then we see it again very long and pointed—this last is very awkward for young chickens to swallow, and, when down, there is greater danger, as it sometimes gets crosswise of their crop, remains there, causing irritation, inflammation, and often kills them.—Every poulterer should look to the kind of corn he buys, and get good round grain of small size.—*Poultry Bulletin.*

How does man differ from the brute creation? He stands upright; but he doesn't act so.



Live Stock Register.

For the Maryland Farmer,

FEED AND CARE OF PIGS.

From the many inquiries as to "what you feed your pigs?" we judge a few practical remarks on the generally acknowledged best care for pigs will not be amiss. Pigs should learn to eat when very young, and thus become gradually weaned, suitable food should always be kept within their reach—in a trough divided by slats across the top, and put in separate enclosure to which the pigs can have access through the opening of the fence. The hog pens should be kept clean, and supplied with plenty of pure water. Do not compel the pigs, which are naturally clean animals to wallow in their own dirt. The pigs must be furnished with comfortable quarters in cold weather—the pens opening on the South—as draughts of cold air are very injurious. When confined to the pens they should be abundantly supplied with chunks of charcoal, decayed wood, &c., which they will delight to gnaw, much to the benefit of their health; coal ashes are also good. Pure ground bones should be occasionally given them. Hogs are very fond of sulphur, and is highly advantageous to them. The following mixture will be found cheap and very beneficial to be kept constantly in boxes in the pens of the hogs and pigs: mix four quarts of salts, two ounces of sulphur, and four bushels of wood ashes. This tends to reduce fever, destroy worms and aid digestion. "An ounce of prevention is worth a pound of cure." While the pigs are yet sucking and weaning, their feed should consist of milk or whey with vegetables; bran, shorts, &c. stirred in; soaked corn is also a good feed. They should be fed regularly three times a day, and none should be left in the trough to sour and become filthy. Young pigs must not be fed on too stimulating food to "get them up." Some breeders do this, and when the purchaser receives and treats them as they should be treated they "go back" on him. Thus many condemn pure bred stock on account of the mistaken policy of certain breeders. On the other hand, the young pigs must be kept growing and not

allowed to get any "back sets." There is some truth in that breeder's remark, who, when asked for the pedigree of his pigs said, "they were out of Swill Tub by Corn Crib." When fattening they will eat and especially corn, all the food that should be given, the more the better. To illustrate this, a pig requires a certain amount of food each day to keep up life and animal heat—now all the breeder can get a hog to eat over that amount is so much absolute gain. The hog should be regarded as a workshop for the conversion of corn into pork. When pregnant, the sow should not be fed so high as at other times; if fat she will not breed nearly so well, and will probably become feverish, thus impairing the health of herself and her pigs. They should have considerable room for exercise and in summer will keep well on pasture, especially, in a good orchard. When she has littered, she must have constant attention, and receive feed suited to her wants, being supplied three times a day, with feed and pure fresh water. The charcoal, &c. must not be neglected. Weaning should be done gradually and with judgment, a few pigs being taken away at a time until only one remains, then allow this pig to suckle less each day for several days; all along attention must be given that the milk is drawn from each teat. The sow's feed must be lessened and, perhaps, only to pasture or even to water alone for a day. No regular rules can be given, but observation must teach the breeder the exact requirements of each sow; after nursing, the sow should have two or three weeks rest before being put to the boar again. If the proper attention is given, two litters of fine, healthy pigs can be had from a sow in a year.

W. ATLEE BURPEE.

HOLSTEIN CATTLE.

The Dutch have for centuries been noted for their skill and thrift as husbandmen and they have exported dairy products for a thousand years.

During all this time there has been a gradual improvement in their cattle by a process of selection, owing to the natural rivalry of dairymen. The source from which the best strains of milking cattle were introduced into Holland is now known to have been Holstein.

The exportation of the Dutch breed into England has done much toward bringing the improved Short-horns and Ayrshires to their present state of development.

The care exercised in the selection of the finest animals for dairy purposes for many generations in North Holland has resulted in producing a large breed of black and white cattle, which are imported

into this country under the name of Holsteins. The name takes its origin from the source whence the Dutch cattle have been most signally improved, and has, by the common consent of importers and breeders, been adopted to designate the large black and extraordinary milkers that are imported into America from North Holland.

Special attention has been turned toward this breed for the past ten years by those interested in dairy husbandry. The remarkable results attained by the animals imported by the late Winthrop W. Chenery, Esq. and also by Mr. Gerrit S. Miller, as reported in the Holstein Herd Book, have had great effect in extending the importation and dissemination of these cattle throughout the United States. The average yearly yield for three years of of three cows belonging to the latter gentleman has been 9,597 lbs. of milk per cow. A careful estimate showed the production of Mr. Chenery's cow Texelar in one year to be 15,600 lbs. of milk, or 7,200 quarts. This milk, as stated by Prof. Hayes afforded 22.72 per cent. of cream, and the cream of six days' milk, when churned, produced 17 lbs. 14 oz. of good butter. When fresh in milk, Texelar's udder measured 66 inches in circumference.

The milking quality of this breed is imparted to a large extent to grades; the prepotence of the bulls shows itself in color (black and white) usually imparted to the half-breeds, as well as in the other peculiarities of this stock.—*Western Agriculturist*.

CATTLE FOOD.

Experience teaches us that cattle thrive best on a mixed diet; all hay or all grain will produce less beef than hay and grain. The animal structure of the ox also demands bulk in food as well as richness, the feeding of concentrated food being only profitable so far as the animal assimilates it, beyond that simply increasing the manure heap at a cost far beyond its value. The ox has approximately eleven and one-half pounds of stomach with only two and one-half pounds of intestines to each one hundred pounds of live weight; the sheep has less stomach and more intestines, giving a smaller percentage of digestive apparatus; while the pig for every one hundred pounds of his live weight has only one and one-third pounds of stomach to six pounds of intestines. A steer would thrive on a bulk of straw a little oil meal, that would shrink a sheep and starve a pig. Pork can be produced from clear corn meal, while mutton requires a greater variety of food, and beef cattle would become cloyed and diseased with its exclusive use.—*Exchange*.

An infallible sign of hard times—the large increase in the sale of chopping bowls and knives.

Observe and Reflect.

It is related of an English farmer that he condensed his practical experience into this rule:

"Feed your land before it is hungry, rest it before it is weary; and weed it before it is foul."—Those words should be written in the heart of every man who desires to *farm*, and may go far to answer, in his mind, the question so frequently and so anxiously asked, does farming pay? The rule demands the exercise of the qualities needful for success in every occupation—untiring watchfulness and prudent knowledge, forethought, energy, and economy, regularity, attention to little things, personal supervision, and *observation*—this latter a power requiring education and constant exercise. It may not be altogether amiss to say that this power of observation, although named last, is perhaps the most important to a farmer. In this wondrous world, this panorama, as it has been called, of thought and action, of forces, currents, growth, decay, special beauties are presented to the agriculturist, but, alas! while many *see*, few *observe*.

Millions *see* only and never acquire the habit of detecting good in what they see, so as to use it, or of evil so as to shun it.

It is this power of observation, trained, exercised, which in agriculture has done so much; it has reclaimed exhausted lands, fertilized barren soil, improved tools machinery, and raised the value of stock.

To this may be traced the development of agricultural chemistry. The phenomena of vegetation and the chemical constitution of substances had previously been observed.

To young men about to enter on the noble profession of agriculture, the foregoing is of value.—Too many enter on its pursuit with the idea that it is easily attained, that success is an affair very much of chance, or weather, of cheap or dear land, or of market values for products. While doubtless, there is an element of truth in such thoughts, it ought to be ever borne in mind that no occupation requires more constant exercise of mind and body; that the better educated the farmer is the more he maintains and increases his knowledge, the more he becomes acquainted with natural and physical science, the more his reasoning faculties will be aroused, and his ability to *observe* increase.

His observations should be recorded and studied. There is great practical utility in the well-known saying of Captain Cuttle, "when found, make a note of."

With this enchanted power to *observe*, and to reason on the matters observed, the farmer will be in a better position not only to follow the simple rule already given, but by taking advantage of any of the adventitious circumstances named, he will elevate his noble profession and himself.—*Scottish Farmer*.

THE APIARY.

MY BEES.

I have now been engaged in bee culture for twelve years, and I propose to give a short article on this subject. In my first attempt at bee culture my losses were quite severe, but I determined to succeed and I persevered. I now look back over my past experience, and I am certain that my losses were, in nearly every case, clearly due to the unsuitable hives and improper management.

For several years past I have used a hive of my own invention, and manage my bees upon what I have proved to be correct principles, and I find no cause for complaint. I have found that surplus honey sells best when put up in small glass boxes, each holding about four and one-half pounds. For this reason I have my hive arranged so that it will receive thirty of these small glass boxes at one time. When these are filled, I remove them and substitute others. I often get two sets of these boxes (60) filled by one hive in a season, and as this honey brings in market from thirty to forty cents per pound, I get a good profit from such hives. My average profit per hive is over \$50 annually.

There is no employment in which woman can engage which is better adapted to their sphere, or which will pay better for the time devoted than bee culture. I am acquainted with many who are meeting with great success in the business. I recollect, especially, the case of a lady in a distant State who purchased of me a hive of bees some years since, and she is succeeding admirably in her enterprise. Her health was quite poor at the time from too close confinement at in-door labor. She writes me that since she commenced the care of bees, from being more in the open air, taking more exercise, etc., her health has greatly improved, and with the aid of her bees, notwithstanding she performs less in-door labor, her yearly income has more than doubled. I am an earnest advocate of out-door employment for women; and what is more inviting than bee culture? Bees make ample returns for each little care and attention.—*Mrs. L. E. Cotton in the Stock Journal.*

STUFFED CORNED BEEF.—Take a piece of well-corned rump or round, nine or ten pounds; make several deep cuts in it; fill with a stuffing of a handful of soaked bread, squeezed dry, a little fat or butter, a good pinch of cloves, allspice, pepper, a little finely-chopped onion, and a little marjoram or thyme; then tie it up tightly in a cloth and saturate it with vinegar; boil about three hours.

Elegant Habits of Bees.

Did any one ever sufficiently admire—did he indeed, ever notice—the entire elegance of the habits and pursuits of bees? Their extraction of nothing but the quintessence of the flowers; their preference for those that have the finest and least adulterated odor; their avoidance of everything squalid (so unlike flies); their eager ejection or exclusion of it from the hive, as the instance of carcasses of intruders, which, if they cannot drag away, they cover up and entomb; their love of clean, quiet, and delicate neighborhoods—thymy places with brooks; their singularly clean arrangement of so liquid and adhesive a thing as honey, from which they issue forth to their work as if they had nothing to do with it; their combination with honey-making, of the elegant manufacture of wax, of which they make their apartments, and which is used by mankind for none but patrician or other choice purpose; their orderly policy; their delight in sunshine; their attention to one another; their apparent indifference to anything regarding themselves, apart from the common good. * * In the morning, the bee is honey, in the evening, the waxen taper; in the Summer noon, a voice in the garden, or in the window; in Winter, and at all other times, a meeter of us in books. She talks Greek to us in Sophocles and Theocritus; Virgil's very best Latin in his Georgics; we have heard of her in Italian; and besides all her charming associations with the poets in general, one of the Elizabethan men has made a whole play out of her, a play in which the whole *dramatis personæ* are bees!—*Selected.*

Situation of Apiary.

It is commonly believed that an apiary is not well situated unless it stands in the sun. This is an error, bees like the shade when working, and like the sun only when in the fields, which then animates and sustains them. They thrive well in thick forests, and delight in them, because there they find an even temperature and a propitious shade. It is a mistake to suppose that hives, exposed to the sun, produce the earliest and strongest swarms. I have oftener than once experienced the reverse. My earliest swarms have generally come from the best shaded hives, and which only receive the sun late.—[DeGélien in Bee World.]

The Short-horn cow, 10th Dutchess of Geneva, bought by Lord Bective for \$35,000 at the New York Mills sale in 1873, and lately dead, gives occasion for the English press to say that, notwithstanding her early death, she has proved a good investment to the purchaser.

LADIES DEPARTMENT.

A Chat with the Ladies for September.

BY PATUXENT PLANTER.

When for months the chastened earth
Wails in measures sad of dearth,
And the hollow sky but echoes a refrain—
What a wild ecstatic thrill
Leap along each vale and hill,
At the kissings of the sweet and welcome rain!
How the springing grass roots laugh,
As the nectar rare they quaff!
How the trees, transported, wave their arms
and nod!
While the flowers, from bondage free,
Quickly blossom forth in glee,
And all nature seems to praise the gracious God!

The lines just quoted I came across, just at the moment when their truth and beauty could be appreciated, and when no words could be more appropriate to the state of things around me, so I began this talk with them, thinking that some of my readers may have had the like experience during the present or past seasons. Sitting at my study window wearily, one hot evening, listlessly looking over the landscape, undisturbed by the rustling of a leaf—the birds with drooping wings, were tuneless—the kine were panting under the shade—the corn blades curled and hanging, as if each plant was a broken umbrella—the flowers, seemed suffocating and parched as a fevered patient, when a small cloud arose from the south-west and spread gradually until the sun was veiled, and then came a slight trundle among the leaves; a lurid flash, and a roll of sound as if a thousand drums beat, or a hundred cannon discharged in the upper air—soon came down the rain—"the sweet and welcome rain," first in gentle kisses, then growing impetuous, it fell in torrents, and then subsiding for a time, again pouring, and so continuing until all nature had enough to quench its thirst and more to spare, yet powerless to store away for future use. The grateful rain ceased, the air had been purified by the electricity discharged, and the sun shone forth long enough to bless the world with a brilliant rain-bow—that bow, which the Lord said should ever remind man of His covenant—glorious bow! It was at this moment, my own heart sent forth the aspirations of gratitude along with what seemed to be kindred thankfulness from grass, plant, tree, flower and kine.

"All nature seemed to praise the gracious God!"

As there is not much to be done in the flower garden just now, we should turn our attention to the saving of choice flower seeds, and the propa-

gation of plants for winter service and for the next spring's planting. The early part of this month is a good time for striking cuttings in the Middle States, it is rather late for the North and quite early enough for the South—the land of chivalry and beauty!

For a cheap and sure propagating bed, get a sufficient quantity of one part scraping of the barn yard or wood's mould, run through a coarse sieve, and 4 parts clean sand, free from gravel, river sand, best, mix well and form a bed 6 inches high. On this put hand glasses, or boxes with a pane of glass no the top. But best to have a frame 4 to 6 feet long and 3 feet wide, like a hot bed frame—an old hot bed frame and glass would be the very thing.—White-wash the glass to prevent the sun having too much effect. Make the bed in a shady place—that is, so as to be shaded in the warmest part of the day, as some sunshine is good for the plants. The glasses can be raised sometimes, if the beds seem too hot. Smooth the whole bed, draw by a narrow board straight lines, and then cut a face into the sand one to two inches deep, and set the cuttings against the face or straight side of the little trench, 3 inches apart and the trenches 4 or 5 inches apart. When the cuttings are set, press the sand gently but firmly with a board against them, cuttings of 3 or 4 eyes are long enough for most strong growing plants as roses, geraniums, fuchias, &c. Small growing plants of course will have more buds to one cutting. From one to 3 inches is long enough for most cuttings. Insert them a third of the way under the sand. In taking cuttings, get half ripened wood if possible and cut the shoots just under a bud. After planting, water gently, so as to close the earth about the plants. Keep the sand moist, but do not give too much water at a time, or too often as it may cause the plants to dump off and die. As soon as fairly rooted pot off in small pots with richer compost. Let the pots have good drainage by putting broken pieces of pots or oyster shells at the bottom.

Every lady should practice the propagation of plants by cuttings, budding, inarching, grafting, sowing seeds. There is a world of pleasure and information in such work that is interesting, and some day may lead to useful and great results.—Many strange and wonderful facts have been discovered in the economy of nature, by accident as it were, by observant men and women while pursuing pleasant rural occupations with no intent to probe the secrets of nature, or as zealous searchers into her mysteries. If the plants you propagate are not wanted by yourselves,—how pleasant it is to give them to your friends, and how rejoiced

many would be to become recipients of your thoughtful kindness to them, and how they would treasure them and mention your name with affection to their friends, as they admired the plant in bloom, that only cost you a few pleasant moments of time to propagate, while never thinking of the pleasure it would give to many others in the future, who would link your name in the praises bestowed upon the flower or plant.

You may sow annuals to stand the winter. Finish planting out the biennials and the perennials sown in the spring. You can plant crocus, hyacinths, lily of the vale, narcissi and other early spring blooming bulbs. Keep the dahlias, chrysanthemums and hollyhocks tied up so that they will not be broken by wind, yet have room to display their flowers, for they make the garden resplendent with beauty this and next month. Give the lawn and edgings of beds the last mowing and trimming for the year, about the first of the month.

As this is the moulting season for poultry they should have particular attention. Give them red pepper in occasional meals, supply them with lime, bones, ground rather fine, a teaspoonful of sulphur in a quart of meal baked or made into dough, sometimes in their food, and put a piece of assafoetida in a rag and nail it in the bottom of their water troughs, or mix some pounded up in their food.—All these will give them vigor, life, and add to the brilliance of the new feathers and to their general healthfulness. Sulphur keeps away the vermin, so old Bement says.

I must close this chat by asking you while it is in season, to try the recipe of *Daniel Webster*, for Fish Chowder. Any solid fleshed fish like drum or our rock, which is a bass fish, will do as well as sea bass or cod: Four tablespoonfuls of onions fried with pork; one quart of boiled potatoes, well mashed; one and a half pounds of sea biscuit, broken; one teaspoonful of thyme, mixed with one of summer savory; half bottle of mushroom catsup; one bottle of port or claret; half a nutmeg, grated; a few cloves, mace and alspice; six pounds of fish, sea bass or cod, cut in slices; twentyfive oysters, a little black pepper, and a few slices of lemon; The whole put in a pot and covered with an inch of water, boiled for an hour and gently stirred.

LARGE ORANGES.—Our table is graced by an immense orange, 10½ inches in circumference, as a specimen of a crop now hanging on the trees at *Ivy Hill*, the beautiful suburban residence of Mr. Whitman, Proprietor of the Maryland Farmer.

Domestic Recipes.

OX TAIL SOUP.—Two tails, three if small, will make a large tureen of soup. Divide them at the joints, rub them with salt, and soak well in luke warm water, place the tails in a stew-pan, with four onions, a bunch of parsley, two dozen Jamaica or black pepper-corns, a sliced turnip carrot, and three quarts of water. When the meat is tender, which will be in about two and-a-half hours, cut it up into very small pieces. Thicken the soup with a little brown flour rubbed up with a ladleful of the top fat; strain it into a clean stew-pan, put in the cut meat, boil and season with a tablespoonful of mushroom or tomato catsup.

TOMATO OMELET FOR BREAKFAST.—Peel and chop five fine tomatoes of good size; season them with salt and pepper, add to them half a teacup of grated bread. Beat four eggs to a foam and stir into the tomatoes. Heat a "spider" hissing hot, put in a small piece of butter, turn in the mixture and stir rapidly until it begins to thicken. Now let it brown for two or three minutes on the bottom, then lap it half over, slip on to a hot dish, and serve for breakfast, garnished with parsley and slices of hard boiled eggs. It is an appetizing and also a handsome dish.

LEMONADE.—Rub loaf sugar over the peel of the lemons, this absorbs the oil from the yellow rind and adds much to the flavor. Strain the juice of the lemons, add the sugar to taste, and fill up with ice chopped fine and water. Use about one lemon to a glassful of lemonade.

A CHEAP DISH.—Take a piece of boneless cod-fish, as thick and white as you can get; pick in pieces and cover with cold water; add an equal quantity of peeled potatoes. Boil together until the potatoes are done and then mash well. In a small saucepan melt a large tablespoonful of butter, stir in an even tablespoonful of flour, and when mixed until smooth a half a pint of rich milk, and salt and pepper to taste. Remove from the fire and add gradually a beaten egg. Return to the fire and stir for a minute or two. Pour over the mashed fish and potatoes and send to table.

FROSTED FRUIT. Select perfect fruit of any small variety, such as plums, cherries, grapes or small pears, leaving the stems on; dip them one by one in a beaten white of an egg or in a solution of gum arabic, and from that into a cup of very finely pulverized sugar; cover the bottom of the pan with a sheet of fine, white paper, place the fruit in it and set in a stove or oven that is cooling. When the frosting on the fruit becomes firm, heap them on a dish and set in a cool place.

BAKED APPLES.—This is a very healthful dish and may be made a very enticing one. Pare and core large, juicy apples, but do not break them in pieces; fill the centres with sugar, a little lemon juice and a thin bit of the yellow part of the lemon rind; put a clove in each apple; lay them in a pan with a little water in the bottom; sprinkle sugar on the tops and bake. Baste them often, and when done set away to cool. Put them on ice if you can, the colder they are the better. Whip cream and spread over them thickly; send powdered sugar around with them. If you live in the city content yourself by serving the apples with rich milk and sugar, or a boiled custard may be poured over them.

A VALUABLE RECIPE.—At the request of a correspondent the New York Journal of Commerce republishes the famous formula of the so-called "Sun cholera mixture," which many years ago proved efficacious. The following is the prescription; Tinct. opii, tinct. capsici, tinct. rhei. co., tinct. menth pip., tinct. campho. Mix equal parts each. In plain English, it consists of equal parts of tincture of opium, red pepper, rhubarb, peppermint and camphor, and the Journal says it is the best remedy extant for summer complaint, diarrhea, cramps, in the bowels and similar ailments, and affords almost instant relief. The dose is from three to ten drops for a child, according to the age, and ten to thirty drops for an adult, according to the severity of the attack.

PICKLING CUCUMBERS.—In answer to an inquiry, a correspondent of the Massachusetts Ploughman gives the following directions. "I would say that with the best of evidence, salt ought not to be used for pickles. My evidence is this: For nearly forty years, whenever friends and acquaintances called our pickles were always a subject of remark, the unanimous opinion being in favor of my method of pickling, which is as follows: Pick the cucumbers of any desirable size; wash them clean; drain them dry; put them into sweet butter firkins; place two gills of spice in a bag in the middle of the keg; then fill up with pure cider vinegar, and your pickles will keep good for twelve months. Put the vinegar, in cold. When not using from the keg, it would be well to stir the vinegar at least once a week. The spice keeps the pickles hard." *Country Gentleman.*

HOME-MADE PUDDING.—Take a half pound of each, currants, flour and chopped beef suet, four ounces of molasses and a cupful of milk; add a little spice: mix well together, and boil it in a cloth or basin for four hours.

BAD COOKING.

"The day perhaps will come when even the daughters of the rich will not think it beneath their dignity to learn how to make bread and pastry, how to roast a joint or cook a potato." Now, it would seem that this was not a very extended nor difficult amount of culinary knowledge to be required of a young woman who ready to venture upon the sea of matrimony, but it will be considered quite large enough to begin with if we compare the houses in which we get a potato or a light piece of bread, with the number of households in the community. It may be set down at once that you cannot get a well cooked potato in any hotel. The servants in the houses where people would like to live well, and know good cooking when they see it, are, in nine cases out of ten, under no genuine discipline. The woman of the house does not know or does not care. A well cooked potato put on the table and eaten just at the proper time—and it does not exceed three minutes—is something which many men, whose butcher bill amounts to hundreds a year, know nothing of it.

It is something which is quite important to understand, and yet which many people never learn, that a good meal depends upon good cooking and upon cost. The joint or the steak which it is impossible to cook so as to be tender today, will, in a few days, be in perfection; a broiled steak or chicken is as rare as cucumbers in Pawtucket. Ninety nine one hundredths of the cooks, hired or wed, fry everything. Which is simply to say that they spoil it. One would think it impossible to injure sweet corn, and yet it is quite easy to allow it to remain in the water long enough to lose a great share of its sweetness. There is not only economy but ease in good cooking. For the ordinary male person, a few things made palatable suffice. The wife who knows how to cater to one or two whims in eating, and now to roast, and boil, and devil a bit of cold meat and make good bread, may defy all rivals, whether of animated or inanimated attractiveness. It might be worth while, perhaps, to inquire how it happens that the girls can master music and languages and all sorts of accomplishment, but are unable to bake or brew, or boil an Irish potato.—*N. Y. Evening Post.*

ICED TEA.—This is a favorite drink at the South. Make some very strong tea, half fill a glass with small lumps of ice and pour over them the tea.—Sweeten with loaf sugar and add a couple of slices of lemon. Coffee is very nice iced in the same manner, leaving out the lemon and substituting a few tablespoonfuls of whipped cream.

Publications Received.

From *Ellwanger & Barry*, of Mount Hope Nurseries, Rochester, N. Y., the 23d edition of their Descriptive Catalogue of Ornamental Trees, Roses, Flowering Plants, &c.

From the same also, Descriptive Catalogue of Fruits. Both these catalogues are nicely gotten up and full of useful matter to all interested in Horticulture.

From *Vilmorin, Andrieux & Co.*, of Paris, France, their Catalogue of Flowers and Fruits.

From *George E. Waring*, Newport, R. I., the Monthly Bulletin of the American Jersey Cattle Club.

From *Gibson & Bennett*, Woodberry, N. J., Illustrated Catalogue of Berries, &c.

From *A. Gray*, Secretary, Monthly Report of the Kansas State Board of Agriculture, for July.

From *S. W. Ficklin*—His Catalogue and Register of fine stock for sale on "*Belmont Stock Farm*," near Charlottesville, Va.

Premium List of the Indiana State Fair, to be held from 24th to 29th September, 1877, at Indianapolis.

From *L. L. Polk*, Commissioner, Monthly Crop Reports, of the North Carolina Department of Agriculture, for July 1877, being interesting to Southern readers.

From *Beach, Son & Co.*, New York, their Fall Bulb Catalogue.

An address delivered 19th October, 1876 before the Piedmont Agricultural Society at Culpeper, Virginia. It is well worthy careful perusal. We shall soon probably publish extracts from it.

From the War Department, Monthly Weather Report, with Weather Maps, for July.

From *D. Landreth & Sons*, Philadelphia, a handsome and useful Pamphlet, on "*The Cabbage Family*," its varieties, qualities and culture. Price 25 cents.

From the publishers, "*The Southern Guide*,"—Advance sheets of a promising work that may,—if it ends as it has begun,—result in material advantage to the whole South, and certainly will be a book of great interest to every reader. It promises to give authentic information relative to the resources and characteristics of the different sections of the Southern States, from old Maryland to Texas; within 130 pages, and 40 engravings.—Price 25 cents.

ACKNOWLEDGEMENTS.—Our friend and eminent horticulturist, *Mr S. N. Hyde*, of "*Boothby Hill*," Harford County, Md., presented us with some of his superior "*Egyptian Sweet Corn*." We return thanks, and must acknowledge that when the test of taste was applied, we concluded it was the very best roasting ear corn we ever eat. His splendid Tomatoes—*Improved Golden Trophy*—we saw at Rennert's Hotel sometimes since, and they were pictures for amateurs to behold. We are sure if an opportunity occurred we should have enjoyed them hugely at lunch, in a raw state, or at breakfast, *broiled*, which is our favorite way of eating this superb vegetable.

A lady friend, whose youthful bashfulness forbids our giving her name, sent us a basket of ripe luscious pears and we blessed her every mouthful we took from the basket. We have not the least objection to receive these souvenirs of friendly regards.

The Locust Plague or so-called, Grasshopper, by *Charles V. Riley*, M. A., Ph. D.: This is a Book of some 200 pages with 45 illustrations, well printed, and gotten up by Rand, McNally & Co., Chicago—Our thanks for it, are due to the author.—We shall give a future notice and make extracts from it. It strikes us to be of much value and full of interest, from our hasty glance at its pages.

AN ENGLISH STEW OF COLD ROAST BEEF.—Cut the meat in small and rather thin slices, season them highly with salt and pepper, and dip each lightly in bread crumbs moistened in gravy or melted butter. Dress them neatly on a dish, and lay over them a thin layer of cut pickles, and moisten the whole with a glassful of pickle vinegar and the preserved gravy of the roast beef; heat in a Dutch oven and garnish with fried sippets or potato balls.

SURE CURE FOR COUGH. Boil one cake of hoarhound in one quart of water until the strength is removed, strain, then add one and half sticks of liquorice (not the root) and one pint of syrup; simmer slowly until all is reduced to a pint; when nearly cold, add a little brandy. Take a spoonful three times a day.

GREEN TOMATO SAUCE.—one quart of green tomatoes cut up fine, a small onion shred fine, a tumbler of good brown sugar, and of vinegar, pepper, salt, alspice and cloves to taste. Boil to a jam, stirring frequently. It must not scorch. An excellent sauce for fresh meat. Keep in small jars.

BALTIMORE MARKETS--Sept. 1.

This Market Report is carefully made up every month, and farmers may rely upon its correctness.

Apples, New York, per bbl.....2 50 a3 50
do. country do.1 00 a1 25

Bark—The market steady and unchanged, No. 1 \$25; No. 2 at \$12a20 per ton.

Beans—Medium to choice.....1 00a3 00

Beeswax—Prices steady at.....0 25a0 29

Broom Corn—Medium to choice.....0 06a0 08

Butter—For table use.....0 18a0 30

" Cooking and bakery.....0 16a0 15

" Near by receipts.....0 16a0 25

Cheese—N. Y. State.....0 11a0 16

" Westerna10 1/2

Cotton—Demand is good.....0 10a0 12

Eggs—Different localities.....0 11a0 18

Fertilizers—Jobbing rates are here quoted. Contracts for large orders can be made at reduced figures. 2,000 lbs. to the ton.

Peruvian Guano.....\$50 00a65 00

Turner's Excelsior.....\$50 00

do Ammonia Sup. Phos.....40 00

Soluble Pacific Guano.....45 00

Rasin's & Co.'s Sol. S. Is. Guano.....50 00

Excelsior Soluble Phosphate.....50 00

do Cotton Fertilizer.....50 00

John Bullock & Sons' Pure Ground Bone.....42 00

J. M. Rhodes & Co.'s Ammoniated Phosphate...45 00

Popplein's Silicated Phosphate of Lime.....50 00

Lorentz & Ritter's Star Tobacco Fertilizer.....55 00

do do do Ammoniated.....50 00

do do do Dissolved Bone.....50 00

R. J. Baker & Co.'s Ground Bone.....40 00a42 00

R. J. Baker & Co.'s Dissolved Raw Bone.....45 00

Zell's Ammon. Bone Super Phos.....45 00

Whitman's Phosphate.....45 00

Missouri Bone Meal.....40 00

Horner's Md. Super Phosphate.....50 00

do Bone Dust.....45 00

Dissolved Bones.....45 00

Moro Phillips' Super Phosphate of Lime.....48 00

Plaster.....per bbl. 1 75

Orchilla Guan A. per ton.....30 00

South Sea Guano.....50 00

Slingluff & Coa Dissolved Raw Bone.....45 00

Slingluff & Co.'s Dissolved Bone Ash.....40 00a42 00

Whitman's Potato Phosphate.....45 00

" Dissolved Missouri Bone.....45 00

" Bone Ash.....40 00

Feathers—Live Geese.....0 40a0 45

Grain—Corn.....0 5'a0 50

Oats.....a0 36

Rye.....a0 60

Wheat.....1 80a1 90

Potatoes—

Early Rose, per bushel.....a

Peerless, per bus.....1 50a1 55

Peach Blow, per bbl.....1 65a2 00

Sweet Potatoes per bbl.....1 50a1 75

Live Stock—Beef Cattle.....0 02a0 04

Hogs, fat.....9 00a10 00

Sheep.....3 00a4 00

Seeds—Clover scarce and in demand.

Clover Alsike.....3 60c

do Lucerne best.....60c

do Red, Choice.....14a16

do White.....60c

Flaxseed.....3 bush. 1.30a1 40

Grass Red Top.....3 bush. 1.00a1.50

do Orchard.....2.50a3.25

do Italian Rye.....3.50

do Hungarian.....1.50a1.75

do Timothy 45 lb.....2.15a2.15

do Kentucky Blue.....2.25a2.50

Tobacco—LEAF—

Maryland—Frosted.....\$2 00a2 50

do. sound common.....3 00a4 50

do. good do.....a6 00

do. middling.....a 5 00

do. good to fine red.....10 00a15 00

do. fancy.....12 00a17 00

Virginia—common and good lugs.....8 50a10 50

do. common to medium leaf.....10 00a13 00

do. fair to good.....13 00a16 00

Wool—For Tub-washed, 35a40 cents; unwashed. 25a40 cents per lb.

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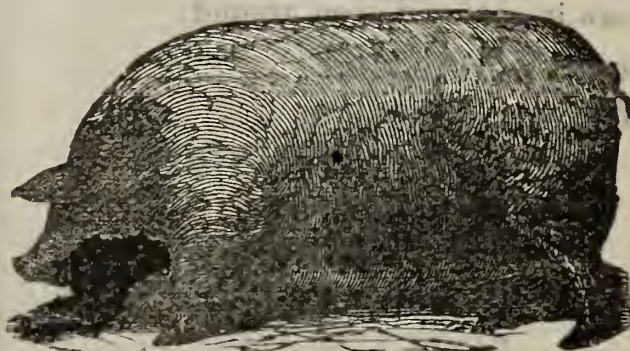
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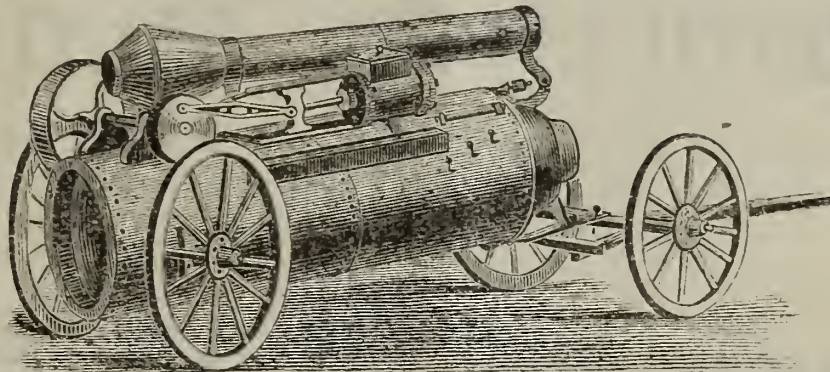
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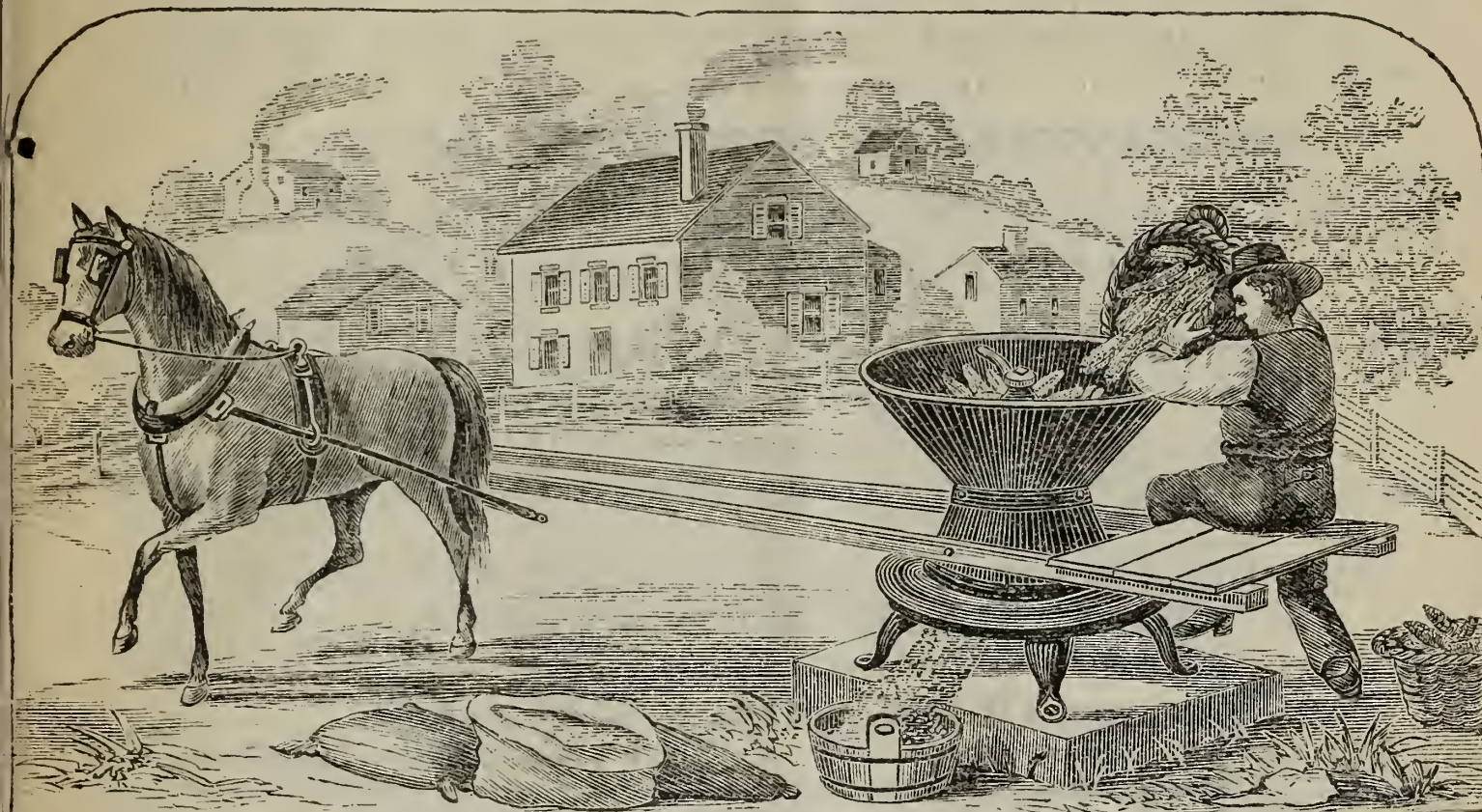
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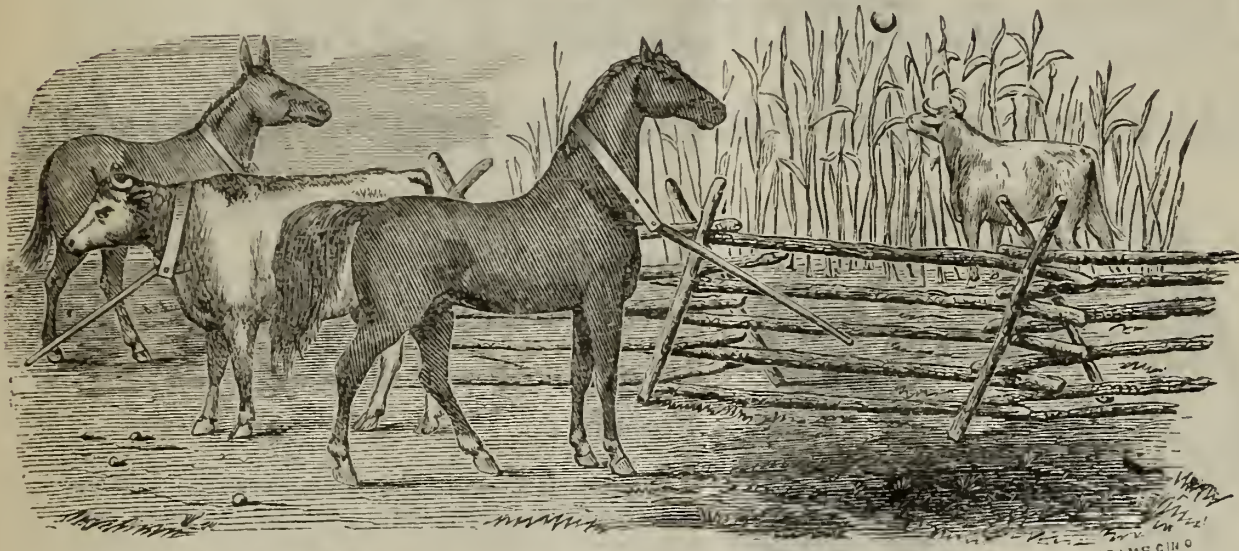
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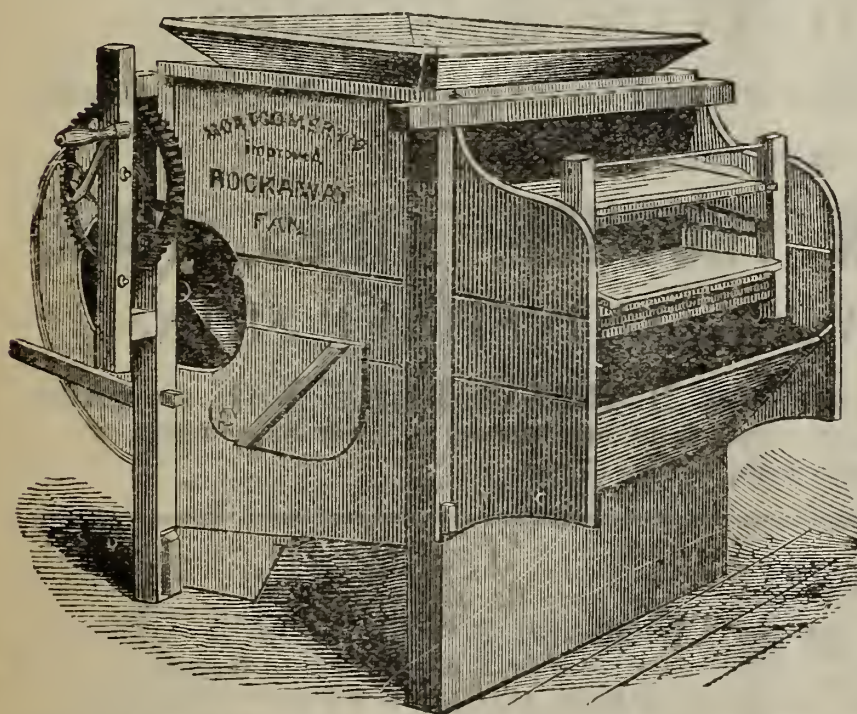
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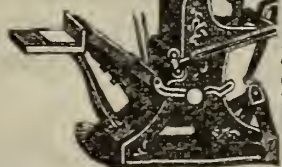
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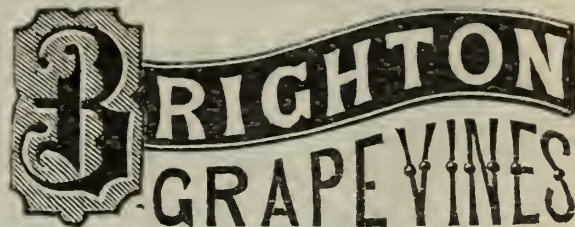
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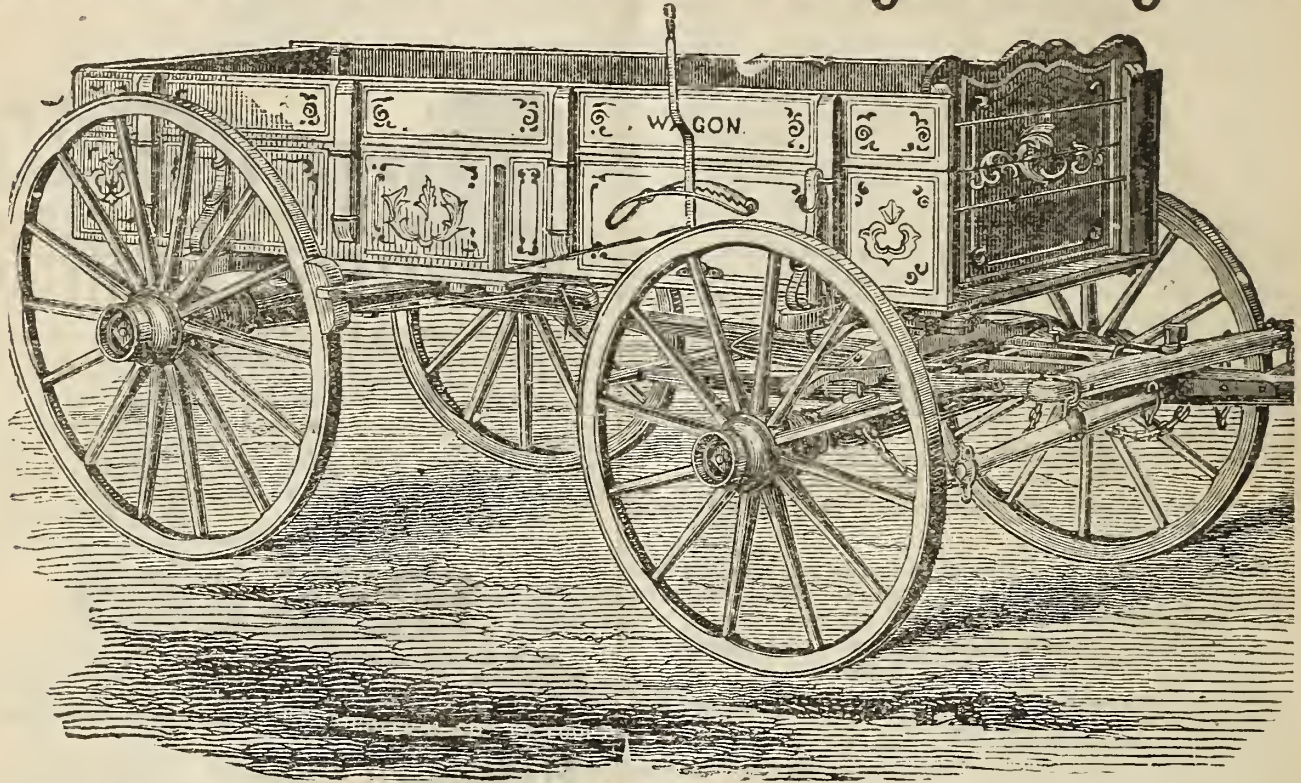
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
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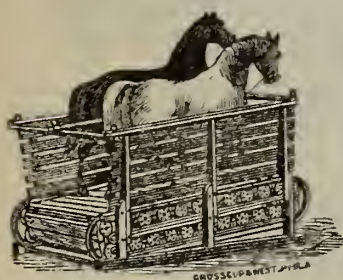
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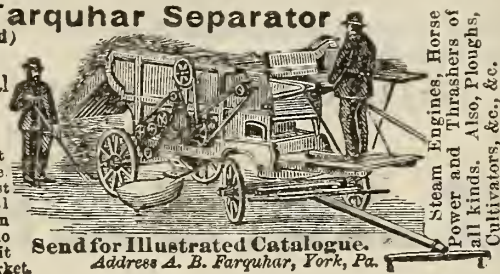
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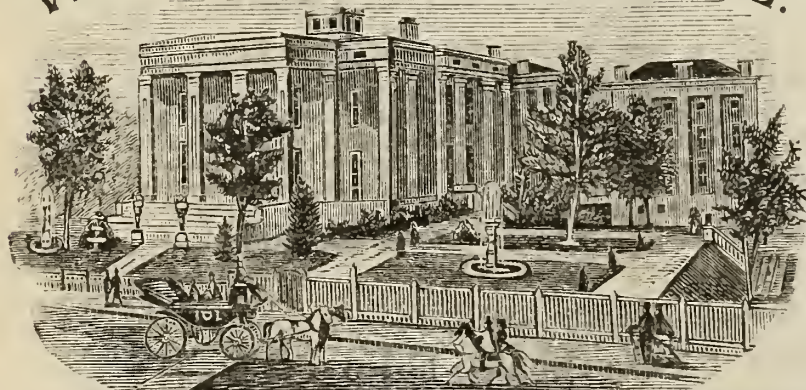
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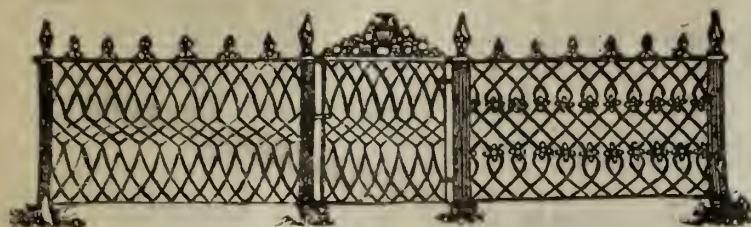
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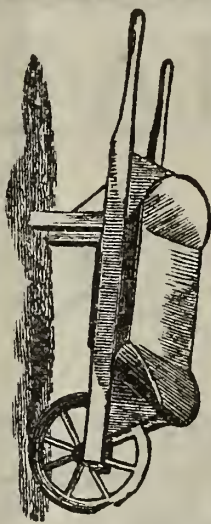
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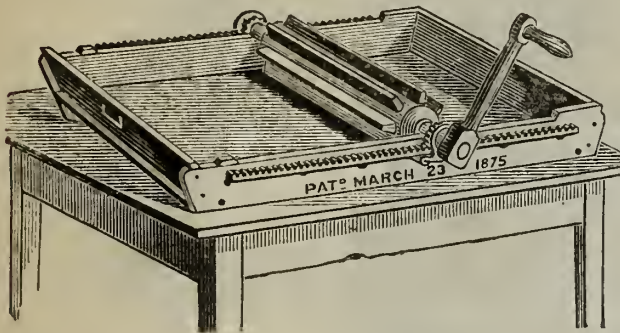
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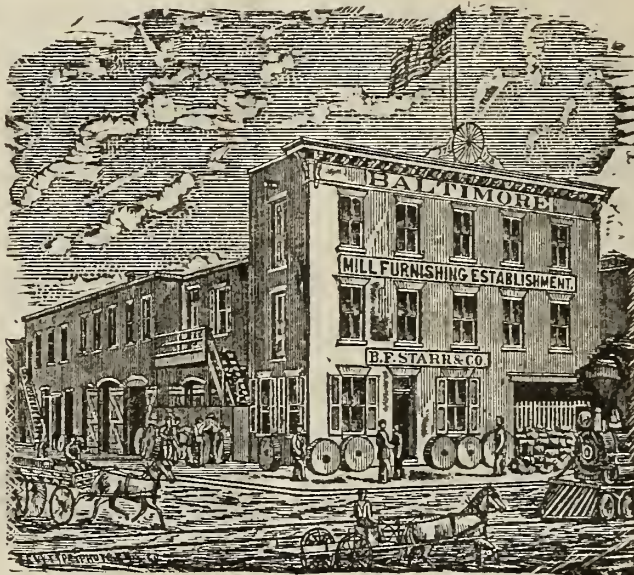
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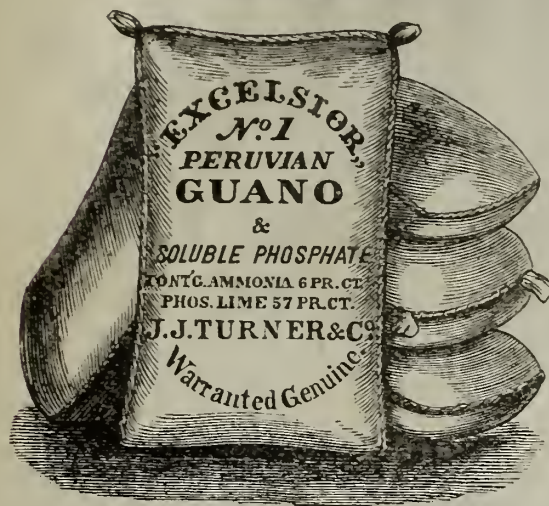
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Soluble and Reverted Phosphoric Acid	10.34 per cent.
Insoluble Phosphoric Acid	1.74 " "
Diatomaceous Silicic Acid	13.07 " "
Potash	2.80 " "

The value of one ton of 2,000 pounds of this Fertilizer is as follows:

206.8 lbs. of Soluble and Reverted Phosphoric Acid, at 10 cts.	\$20.68
34.8 lbs. of Insoluble " " at 4 cts.	1.39
261.4 lbs. of Diatomaceous Silicic Acid at 5 cts.	13.07
56.0 lbs. of Potash at 7 cts.	3.92
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